VOLUME LVI NUMBER FIVE

THE NATIONAL GEOGRAPHIC MAGAZINE

NOVEMBER, 1929

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TO carry out the purposes for which it was founded forty-one years ago the National Geographic Society publishes this Magazine monthly. All receipts are invested in the Magazine itself or expended directly to promote geographic knowledge.

ARTICLES and photographs are desired. For material which the Magazine can use, generous remuneration is made. Contributions should be accompanied by addressed return envelope and postage.

IMMEDIATELY after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. Four expeditions have followed and the extraordinary scientific data resulting given to the world. In this vicinity an eighth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, spouting fissures. As a result of The Society's discoveries this area has been created a National Monument by proclamation of the President of the United States.

AT an expense of over $50,000 The Society sent a notable series of expeditions into Peru to investigate the traces of the Inca race. Their discoveries form a large share of our knowledge of a civilization waning when Pizarro first set foot in Peru.

THE Society also had the honor of subscribing a substantial sum to the expedition of Admiral Peary, who discovered the North Pole, and has contributed $25,000 to Commander Byrd's Antarctic Expedition.

NOT long ago The Society granted $25,000, and in addition $75,000 was given by individual members to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees of California were thereby saved for the American people.

THE Society has conducted extensive excavations at Pueblo Bonito, New Mexico, where prehistoric peoples lived in vast communal dwellings before the days of Columbus; it is sponsoring an ornithological survey of Venezuela, and is maintaining an important photographic and botanical expedition in Yunnan Province, China.

TO further the study of solar radiation in relation to long range weather forecastings, The Society has appropriated $65,000 to enable the Smithsonian Institution to establish a station for five years on Mt. Brukkaros, in Southwest Africa.

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Confidential . . .

TO HUSBANDS . . .

The wives who are leaders in society today realize that now it's the fashion (not just the fad) to keep their appointments and start their theatre parties—*on the dot*.

This calls for a supremely accurate watch—a watch that ticks gracefully along always telling *exact* time.

If your wife is the gracious, understanding woman we believe she is, she will want Accuracy first of all.

But lest the beauty of the Hamilton on this page mislead you, sir, let us remind you that Hamilton is the "Watch of Railroad Accuracy"—and a living gift that goes on living!

TO WIVES . . .

Your husband may have told you he really doesn't *want* anything for Christmas. But there's one thing he may need and not know it.

Twenty times a day in his struggle for success he may be hampered by a watch he himself only half trusts.

Yet every investigation proves that the successful man is time-minded. His time means money. His watch *must* be accurate.

So give him a Hamilton. For years it has timed the country's fastest trains . . . and nestled in the pockets of many of America's foremost Captains of Industry.

Its very name assures you of uncanny Accuracy.

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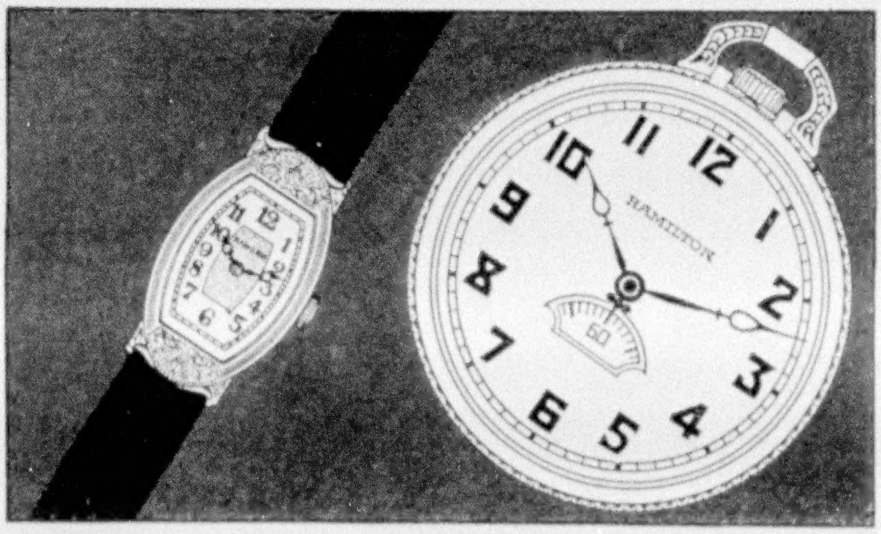
Let us send you a copy of "The Timekeeper," an interesting illustrated booklet, showing a complete line of beautiful Hamiltons. There are exquisite wrist watches, smart masculine strap models, and dignified pocket watches — gifts for all the family this Christmas! Address Hamilton Watch Co., American manufacturers of high-grade watches, 882 Columbia Ave., Lancaster, Pa.



Left—The "Briarcliffe." One of the loveliest of the new women's models. In 14k white gold, $75. With raised numerals $10 extra. *Right*—The "Wheatland"—in 14k filled green or white gold, engraved, $50, with new secometer dial (as shown) $55. Other Hamiltons, $50 to $685.

No. 7. *Inside pictures of the General Motors Proving Ground*

M*artyrs to* S*cience*

Tests at Proving Ground involve every phase of car construction and performance.

MILLIONS OF MILES of testing lie ahead of this group of cars. They might be called "martyrs to science."

They are some of the cars which are being tested at General Motors' 1268-acre Proving Ground, near Milford, Michigan. They include representative makes, both American and European; every type of engine; every type of body. They are being driven night and day, while engineers scientifically record their performance and separate opinion from fact.

The facts determined, studied with an Open Mind, help General Motors to carry out its policy of continuous improvement and to give the public, year after year, still better values—in performance, design, comfort and style.

TUNE IN—General Motors Family Radio Party. Every Monday Evening. 9:30 Eastern Standard Time. WEAF and 37 other stations associated with N. B. C.

"A car for every purse and purpose"

CHEVROLET · PONTIAC · OLDSMOBILE · MARQUETTE · OAKLAND
VIKING · BUICK · LASALLE · CADILLAC · *All with Body by Fisher*
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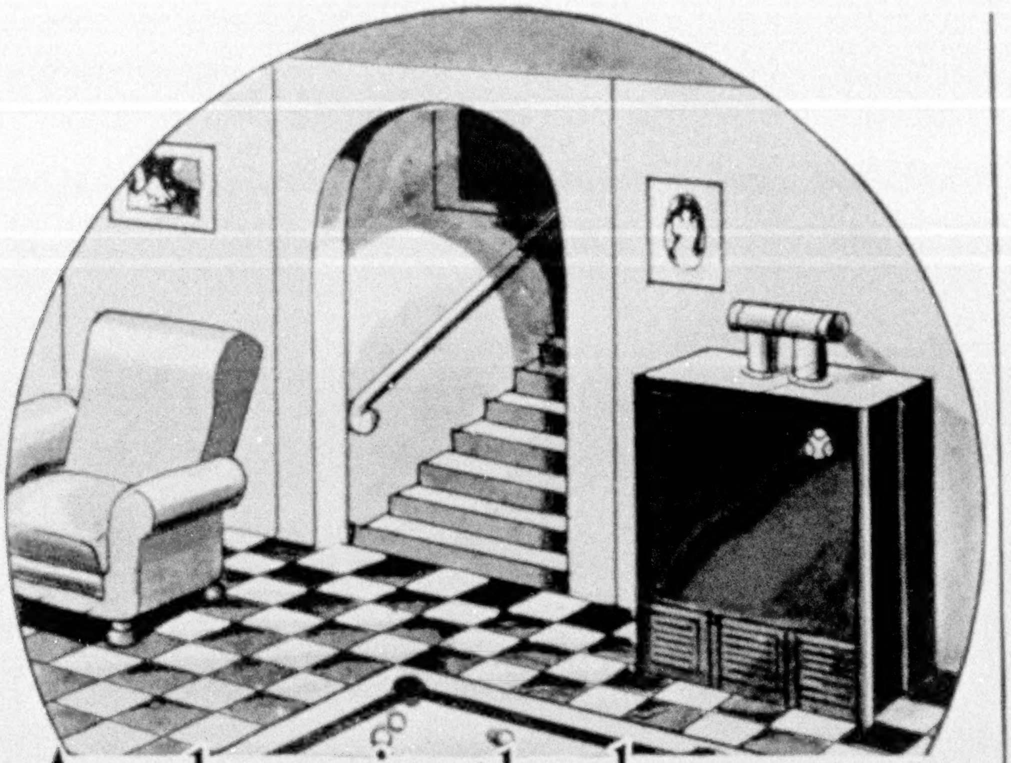

As clean in the basement as it is in the picture–

NO fuel deliveries. No fuel storage. No tools. No refuse storage. No soot. No ashes. No vapors. No odors. Nothing but dependable heat automatically delivered, automatically controlled.

That's

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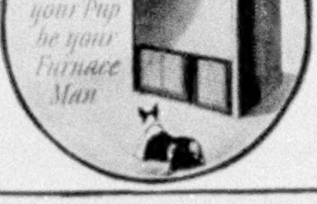
for steam, vapor, hot water and warm air systems


–lets your Pup be your Furnace Man

in old houses and new residences large and small

WITH Bryant Automatic Gas Heating you can throw away your coal shovel—junk your ash can—make a single match your winter's kindling—'tend furnace by the calendar, not by the clock—add a useful room to your house—laugh at the ups and downs of the temperature outside—enjoy winter—*and* . . . . . "let the pup be your furnace man."

Bryant Automatic Gas Heating is truly automatic, as noiseless as your kitchen stove, and *stays* noiseless. It creates no radio interference. With Bryant Heating you can take your winter heating just as much for granted as the water you draw from your kitchen or bathroom faucets, this year and for years to come.

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A confidential word to wives

HUSBANDS—being men—are funny creatures. Being men ourselves, we know. They sometimes buy complicated mechanisms, which require highly expert handling, even though simple devices are available. Then they go down town or out of town and leave their wives the responsibility of keeping the complicated machinery at work.

What a woman wants of a furnace is ample, dependable heat and *complete forgetfulness of what supplies it.*

Women have no desire to play nursemaid to a balky furnace that needs to be fed or coddled two or three times a day. If a group of women were to write the specifications for the perfect furnace and the ideal fuel and then have it built to their order, the result would be a heating plant that would duplicate the new Bryant MODEL 45 GAS BOILER in performance, cleanliness, absence of furnace 'tending, and good looks. May we send you a descriptive folder?

Yes—you may send me further details about Bryant Gas Heating.

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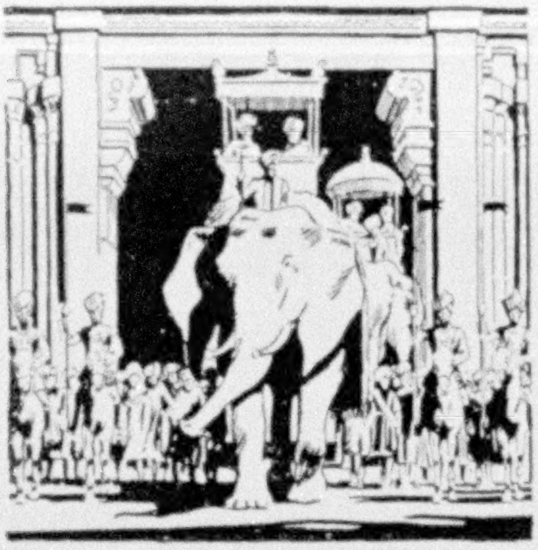

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¶ A world-cruise of double distinction — IN TIME it is the shortest cruise ever to encircle the globe — for the superior speed of the cruise-ship cuts down materially the time at sea — IN ROUTE it is extraordinarily complete . . . visiting, in three months and a half, all the recognized world-cruise points; also *Siam, Korea* and *Formosa.* With 11 days in India; 7 days in China; 10 days in Japan.

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Send for the booklet—"ROUND *the* WORLD CRUISE"

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¶ Four winter cruises on new Holland-America 31,000 ton liner "Statendam" . . . notable for the luxury of her Public Rooms, the size of staterooms and generous deck space. Sailing on December 21, 1929, January 9, January 29 and February 25, 1930 . . . Rates, $200 and upward.

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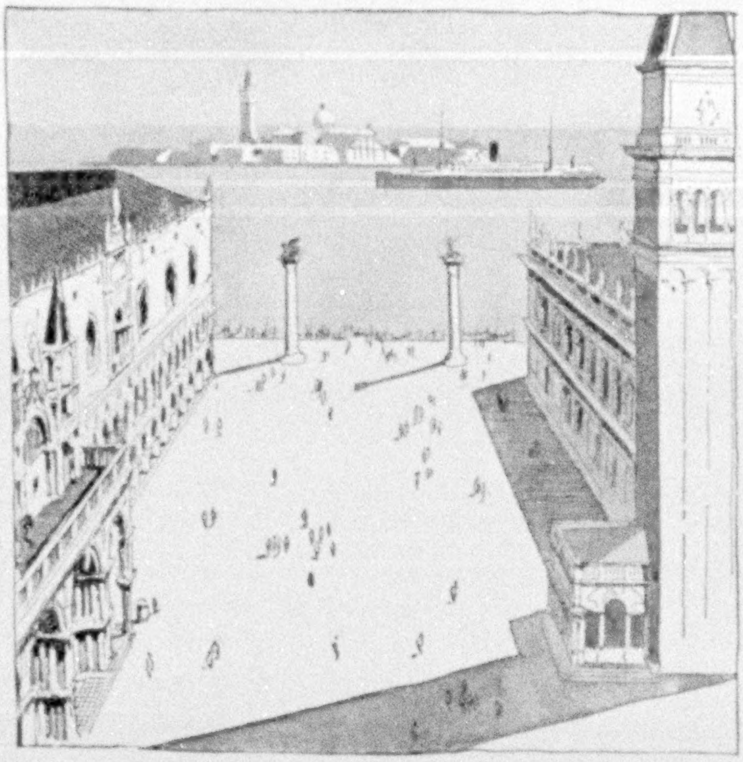

VENICE! As a matter of course the Raymond-Whitcomb Mediterranean Cruise will go to *Venice,* Queen of the Adriatic. And to *Egypt* (for ten memorable days) and the *Holy Land* — to *Constantinople* and *Athens* — *Naples, Sicily,* and the *Riviera* — *Spain* and *North Africa.* For all these are essential to any complete Mediterranean Cruise. ¶ And because it is a Raymond-Whitcomb Cruise with traditions of furnishing more than the usual program — and of seasoning the route with picturesque, out-of-the-way places — it will go also to *Valona* in quaint, unknown Albania — to *Ragusa* and *Cattaro,* two typical Balkan towns — to *Cyprus* with memories of Othello and the Crusades — and to ancient, walled *Rhodes,* city of the Knights of Malta. Take it for a winter holiday!

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Mediterranean Cruise

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Rates, $1000 and upward

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A most unusual cruise which completely encircles South America. It visits the historic *West Coast,* the *Straits of Magellan, Buenos Aires* and *Rio de Janeiro.* Sailing Feb. 1 on the "*Samaria.*" Limited to small membership. Rates, $1250 and upward.

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AT ANY OF THEIR OFFICES

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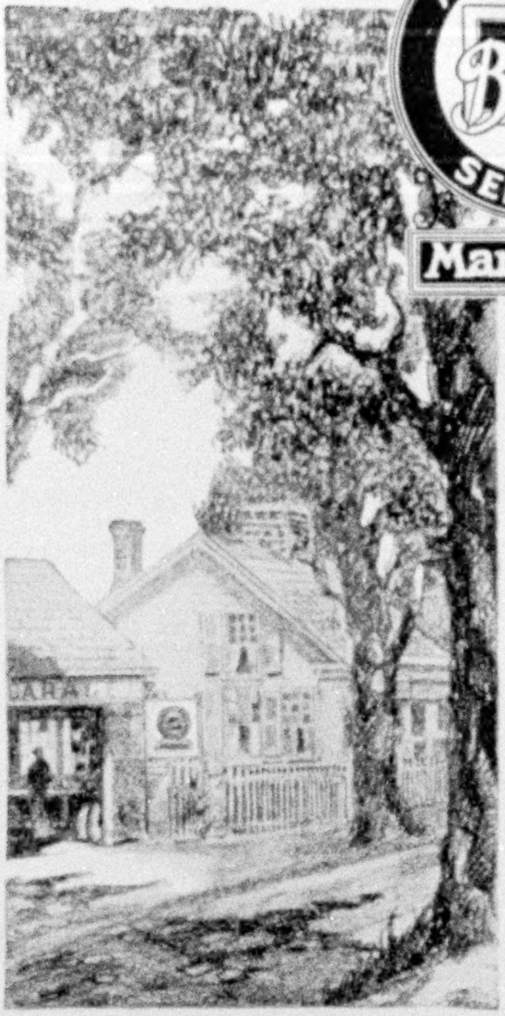
SERVICE
Marquette



THIS FRIENDLY SIGN . . EVERYWHERE

makes all America a Buick-Marquette neighborhood

ALL AMERICA is a Buick-Marquette neighborhood —because more than 4,000 Buick-Marquette service stations in all parts of the country are always neighbors to owners of Buick and Marquette cars.

The familiar blue and white insignia of authorized Buick-Marquette service extends a cordial greeting to these owners wherever they drive, in large towns and small, throughout the length and breadth of the land.

Buick built this service institution to provide an extra measure of owner satisfaction—to add *performance insurance* to the known reliability of its products—to assure Buick-Marquette owners perfect peace of mind.

In addition, Buick pursues a constant program of service education, including field service clinics for its representatives, that Buick and Marquette owners may enjoy thoroughly competent service.

These stations are manned by skilled mechanics, familiar with every phase of Buick-Marquette construction and pledged to uphold Buick-Marquette standards of workmanship.

They are equipped with special factory tools and supplied with complete stocks of genuine factory parts.

Moreover, Buick representatives dedicate themselves to the Buick service creed: to *satisfy the owner* —to serve him promptly, efficiently and courteously—to give him the maximum of service at the minimum of cost.

Buick-Marquette styling, Buick-Marquette performance and Buick-Marquette value have won universal favor. But there is this added reason why Buick and Marquette hold such outstanding leadership and have so many loyal friends:

Buick and Marquette owners ride under factory safeguard at all times. They enjoy the highest degree of travel security of any fine car owner group. Countrywide service is standard equipment with every Buick and Marquette car.

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Canadian Factories
McLaughlin-Buick, Oshawa, Ont.

Division of General Motors Corporation

Builders of
Buick and Marquette Motor Cars

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NEW WORLDS OF MYSTERY, DRAMA, ENCHANTMENT!

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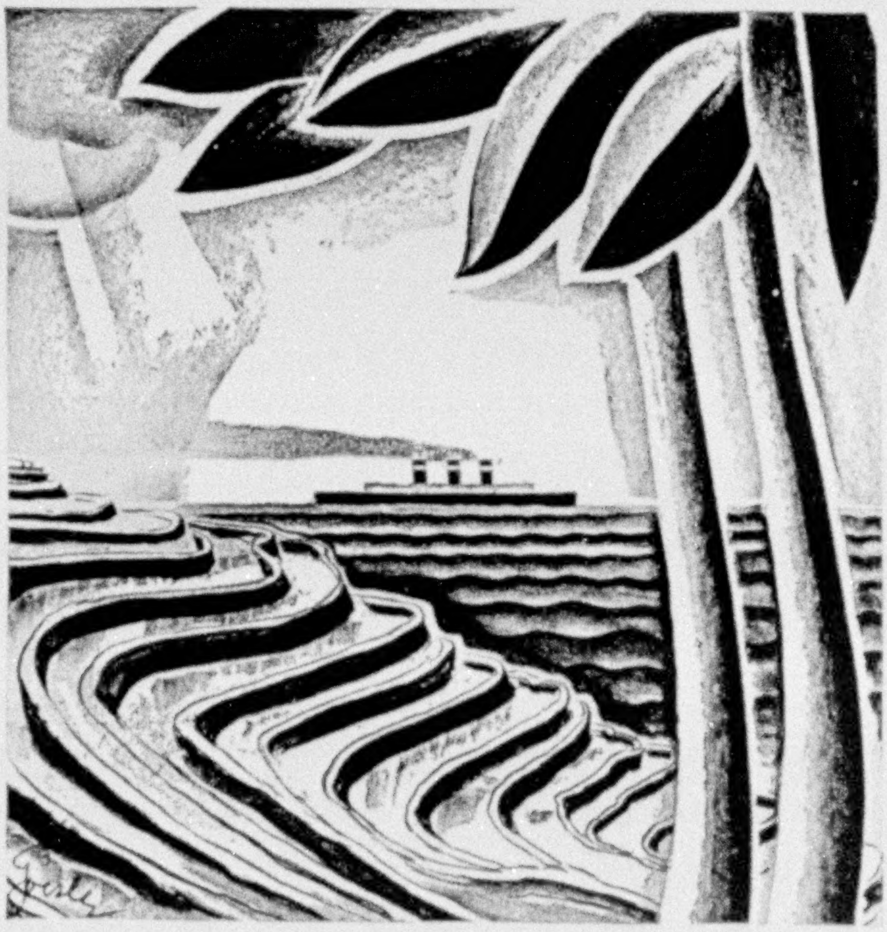

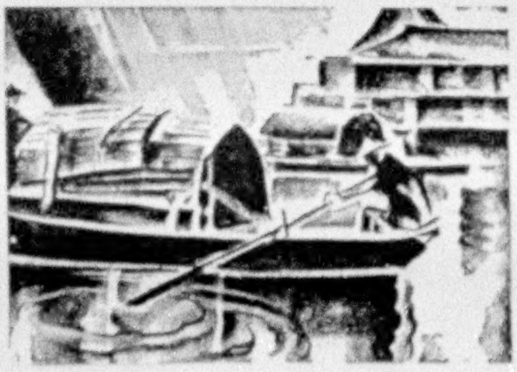

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INTERNATIONAL MERCANTILE MARINE COMPANY

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SIXTY-EIGHT per cent of those who buy the Packard Standard Eight give up other makes of cars—thousands in the ten to fifteen hundred dollar class. These new owners quickly learn—

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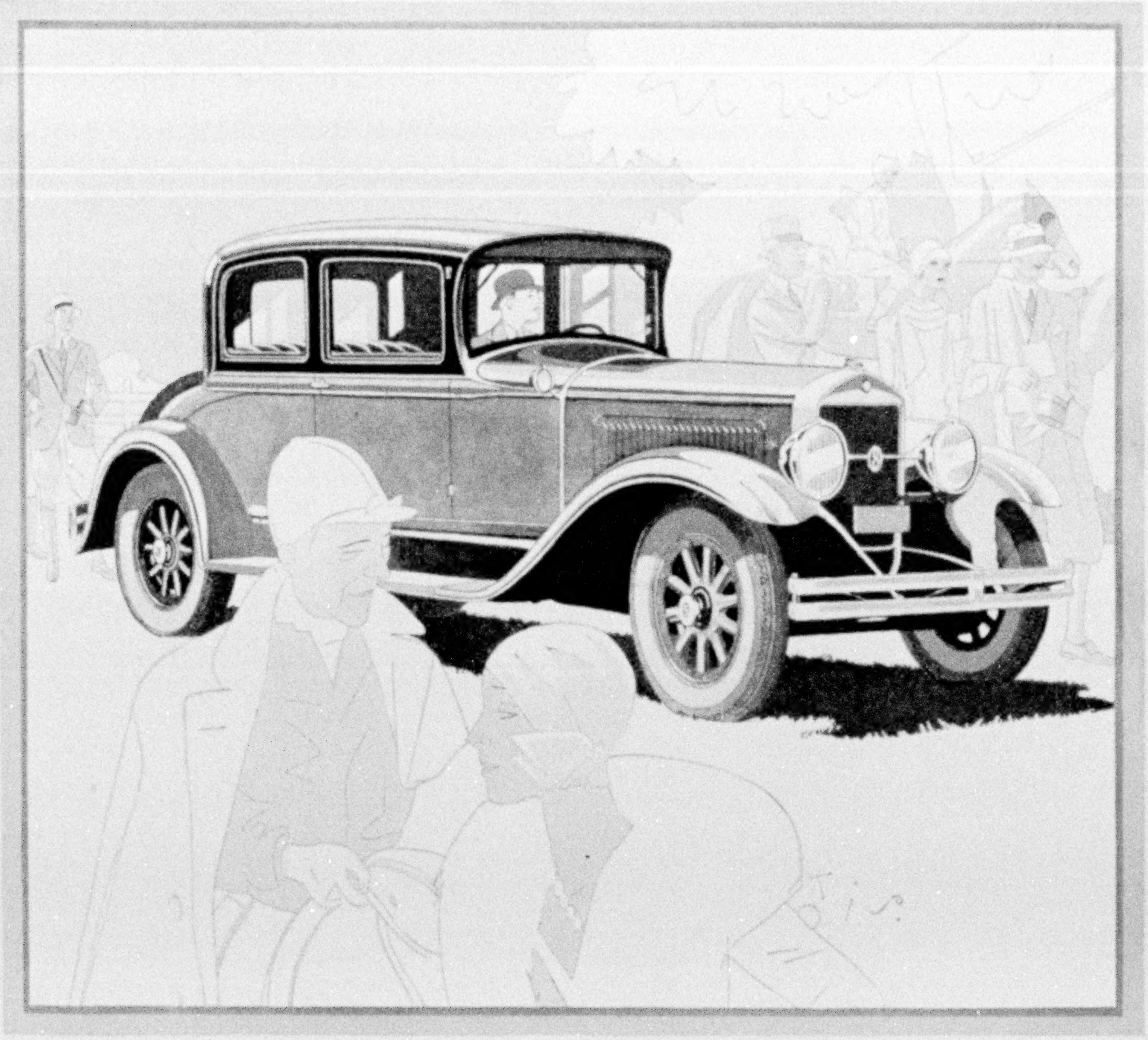

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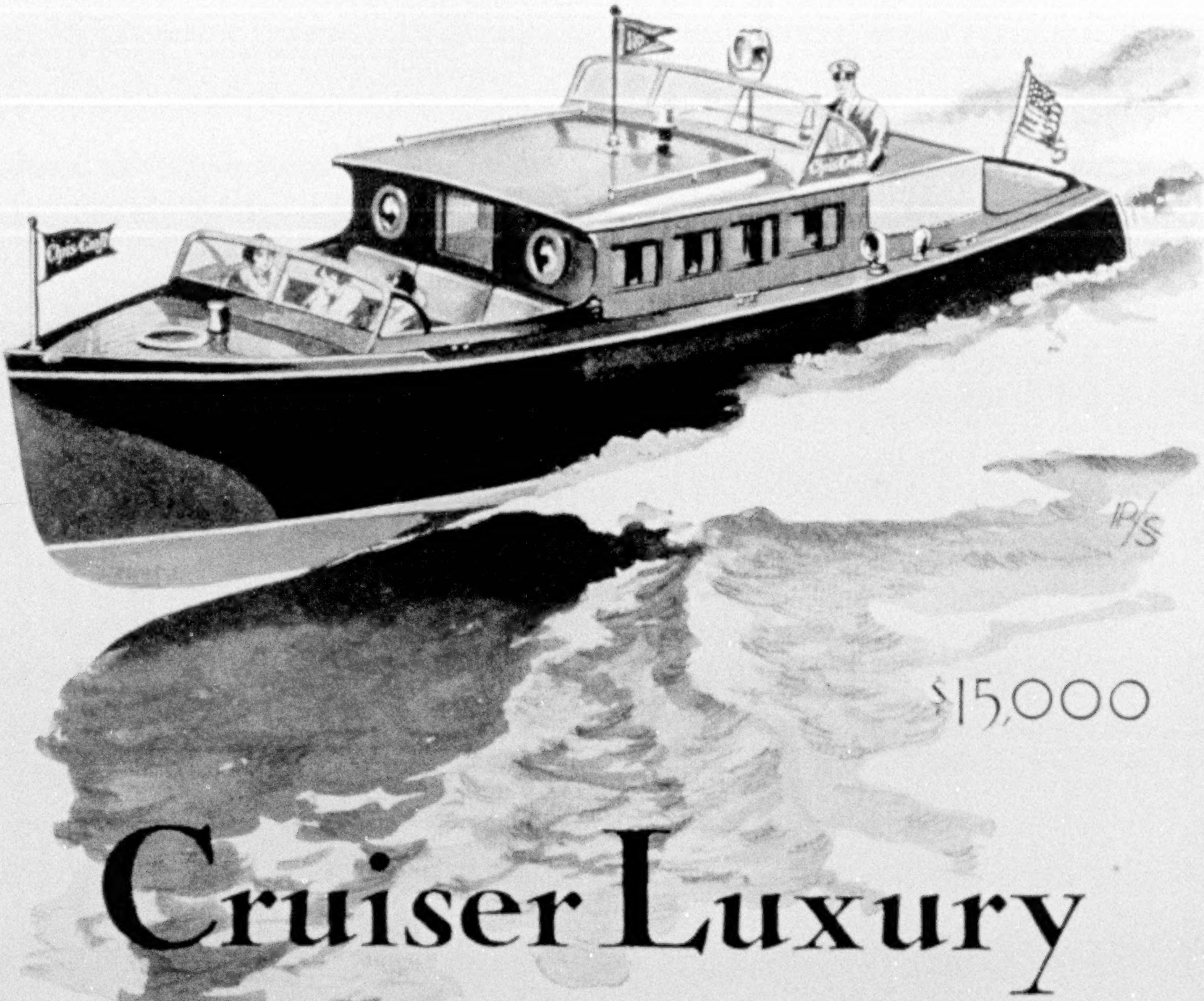

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One Man Control

A 38-foot, 30 mile-an-hour, vee-bottom luxury craft. Here is a fast, sleek, active boat that vies with the wind in speed . . . that will take you hundreds of miles in a few hours . . . that is so completely equipped as to compliment your most distinguished guest.

Luxuriously appointed throughout, this finest Chris-Craft offers ample living quarters. There is comfortable seating capacity for twenty-six. Lounging quarters, cooking and sleeping accommodations are worthy of the three generations of fine boat building that has gone into the making of this aristocrat of motor boats.

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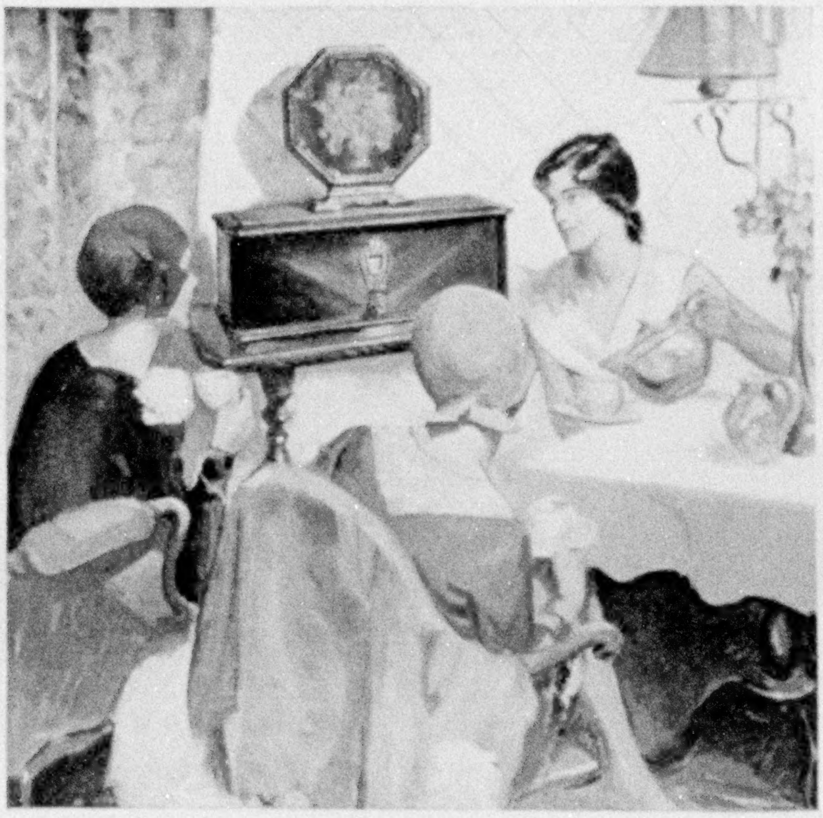
World's Largest Builders of All-Mahogany Motor Boats

Screen-Grid

RADIOLAS

THE SENSATION OF THE RADIO YEAR



RCA RADIOLA 44—*Radio receiver utilizing Screen-Grid Radiotrons—high amplification and great selectivity. Alternating current operation from house circuit. Table cabinet of walnut veneer (shown above).* $110 (less Radiotrons)

RCA LOUDSPEAKER 103—*For use with Radiola 44 (shown above).* $22.50

RCA RADIOLA 46—*Console cabinet model of Radiola 44, with RCA Electro-Dynamic Speaker.* $179 (less Radiotrons)

RCA RADIOLA 47—Combination. *The newest RCA "all-electric" development in Screen-Grid radio combined with the phonograph. Radio and Phonograph utilize the same improved built-in Electro-Dynamic reproducer. "Music from the air or record."* $275 (less Radiotrons)

In addition to Screen-Grid Radiolas there are eight other models of Radiolas and Radiola Phonograph combinations ranging in price from $54.00 to $690.00. Any of these instruments may be purchased through RCA Radiola Dealers on the convenient RCA Time Payment Plan.

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RCA RADIOLA

MADE BY THE MAKERS OF THE RADIOTRON

RCA has set a new standard of radio enjoyment in the new Screen-Grid Radiolas! Designed and built by the same RCA engineers who developed the Screen-Grid Radiotrons and Screen-Grid Circuit, they are the sensation of the radio year.

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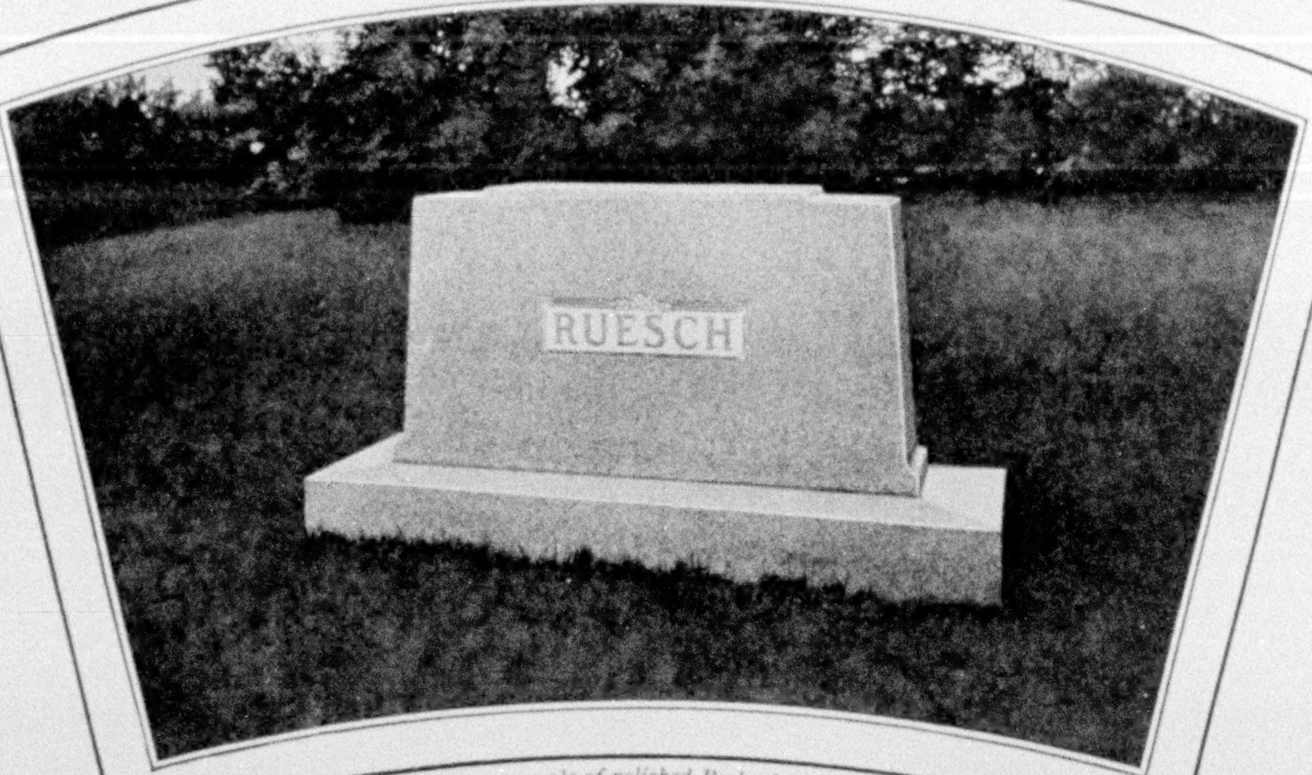
Visit your RCA dealer today. See and hear these marvelous Screen-Grid Radiolas—designed and built by the creators of the Screen-Grid Radiotron and the Screen-Grid Circuit.

Radiola Dealer RCA

Buy with confidence where you see this sign



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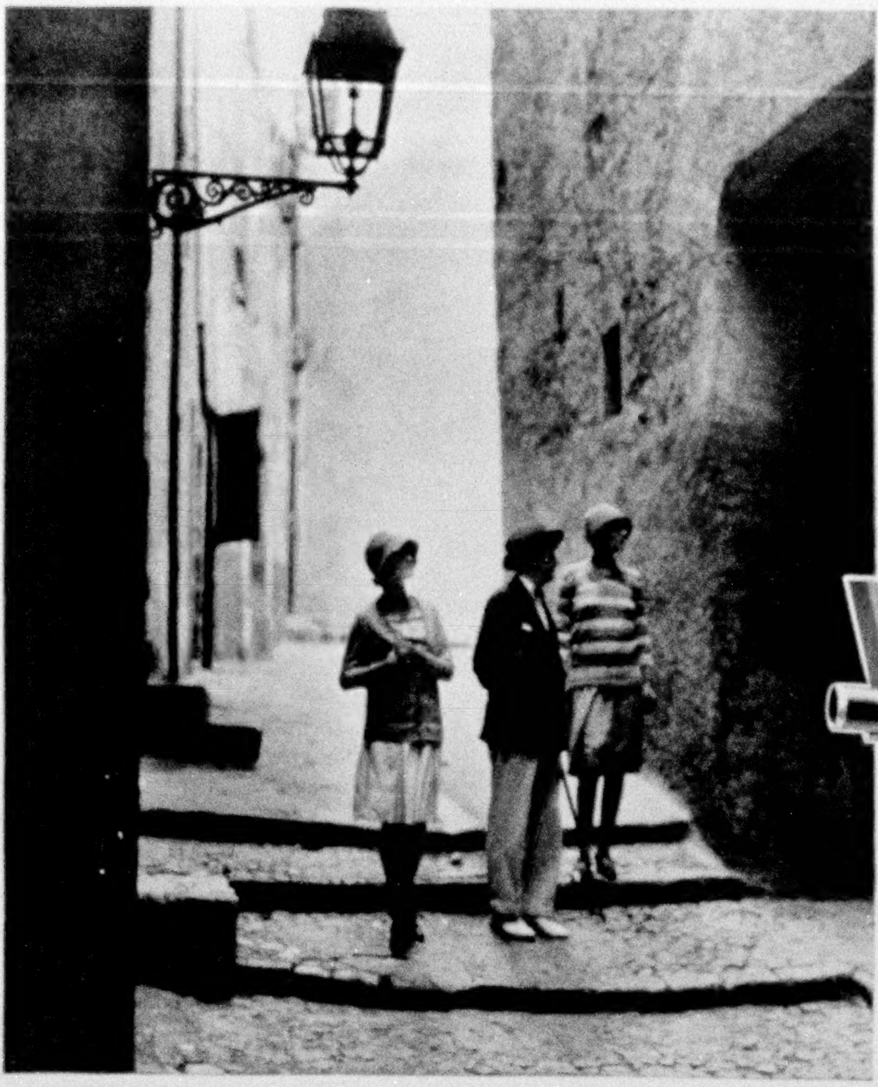

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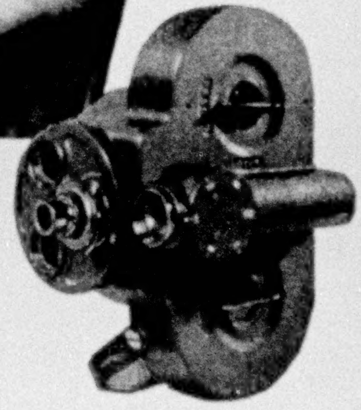
Faultless in every detail of their design, the Filmo motion picture camera and projector form an indispensable part of every traveler's equipment. Adaptable to all photographic conditions, Filmo cameras take the kind of movies you see at your theater—and easier than taking snap shots. Filmo projectors insure the brilliant, flickerless reproduction of these personal movies in your home. It is the finest personal movie equipment you can buy, for Filmo is the result of a worthy tradition—Bell & Howell's 22 years of experience in manufacturing professional movie cameras used by the world's major film producers.

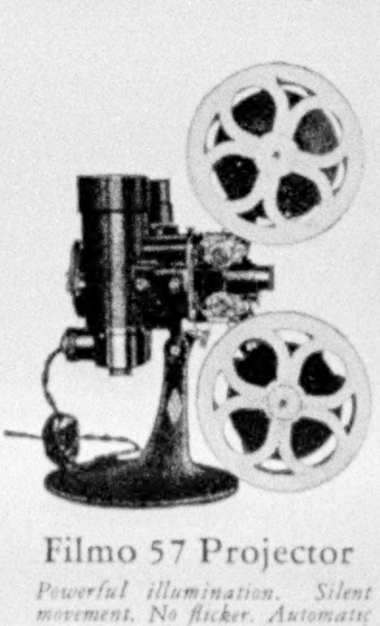
Ask your dealer to show you the various models of Filmo cameras and projectors, or write today for literature.

All Filmos take 50 or 100 foot rolls of film. *For black and white pictures, Filmo Cameras use Eastman Safety Film (16mm.) in the yellow box—both regular and panchromatic—obtainable at practically all dealers' handling cameras and supplies. Filmo Cameras and Filmo Projectors are adaptable, under license from Eastman Kodak Company, for use of Eastman Kodacolor film for home movies in full color. Cost of film covers developing and return postpaid, within the country where processed, ready to show at home or anywhere with Filmo Projector.*



Filmo 70-D

Master of all personal movie cameras. Seven-speeds, three-lens turret, variable viewfinder. $245 and up in Mayfair case with Sesamee lock. Other Filmo 70 models from $180 up with case. Filmo 75, pocket size, at $120 up, including case.



Filmo 57 Projector

Powerful illumination. Silent movement. No flicker. Automatic operation. $190 and up with carrying case.

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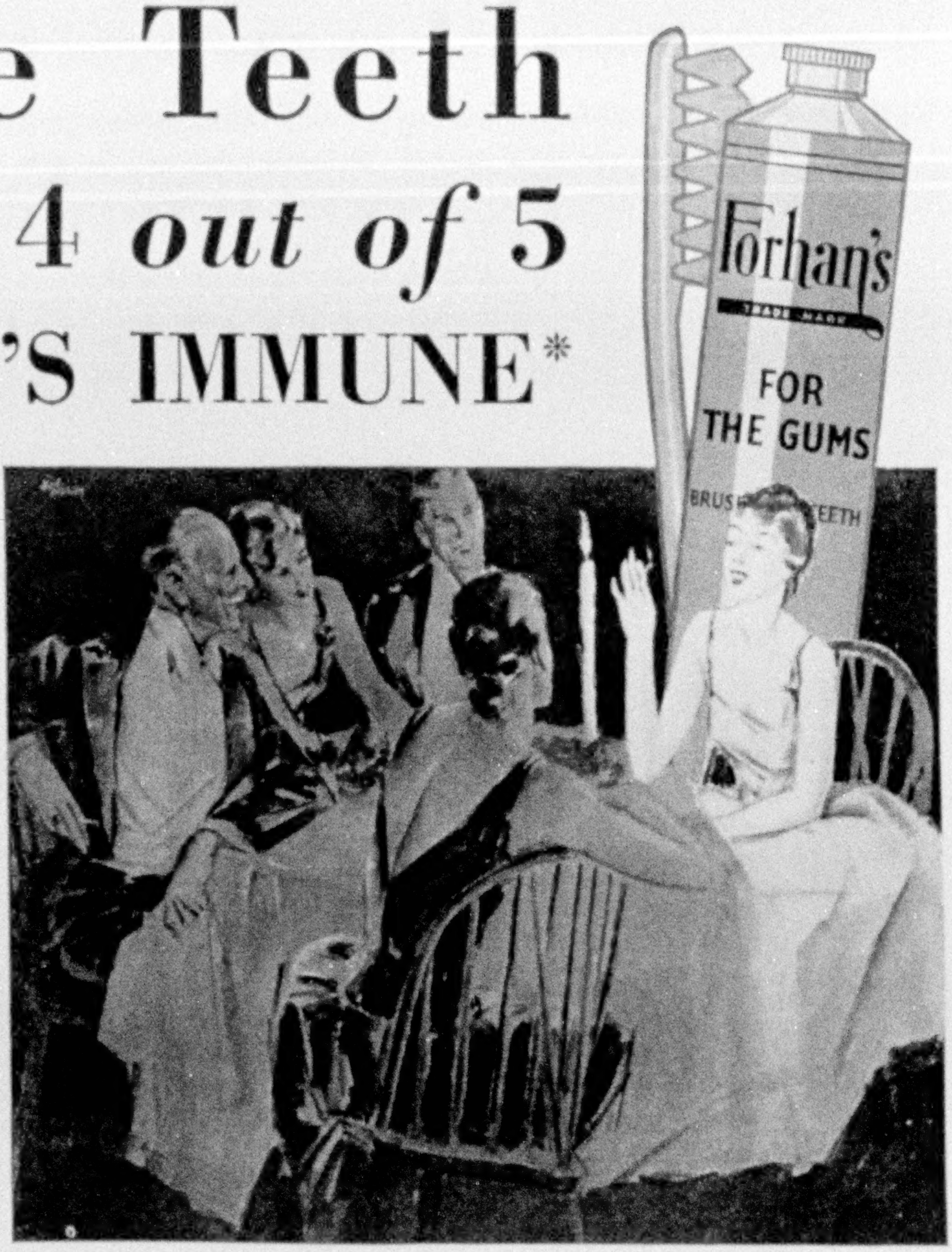
NEW YORK · HOLLYWOOD · LONDON · (B. & H. CO., LTD.) ESTABLISHED 1907

White Teeth
deceive 4 out of 5
NOBODY'S IMMUNE*

** The Disease-of-Neglect Ignores Teeth, Attacks Gums—and Health is Sacrificed*



As your dentist will tell you, the daily brushing of teeth is not enough. For there's a grim foe that ignores the teeth, even the whitest teeth, and launches a severe attack on neglected gums. It ravages health. It often causes teeth to loosen in their sockets and fall out. And it takes as its victims 4 persons out of 5 after forty and thousands younger. It is Pyorrhea.

Don't let white teeth deceive you into thinking that all is well. Provide protection now. It is easier than relief. For when diseases of the gums are once contracted only expert dental treatment can stem their advance.

Have your dentist examine teeth and gums thoroughly at least once every six months. And when you brush your teeth, brush gums vigorously. For additional prophylaxis use the dentifrice made for the teeth and gums as well . . . Forhan's for the Gums.

Once you start using Forhan's regularly, morning and night, you'll quickly note a distinct improvement in the condition of your gums. They'll look sounder, pinker. They'll feel firmer.

As you know, Pyorrhea and other diseases seldom attack healthy gums.

In addition, the way Forhan's cleans teeth and safeguards them from decay will delight you.

Don't wait until too late. To insure the coming years against disease, start using Forhan's regularly. Get a tube from your druggist. Two sizes, 35c and 60c. Forhan Company, New York.

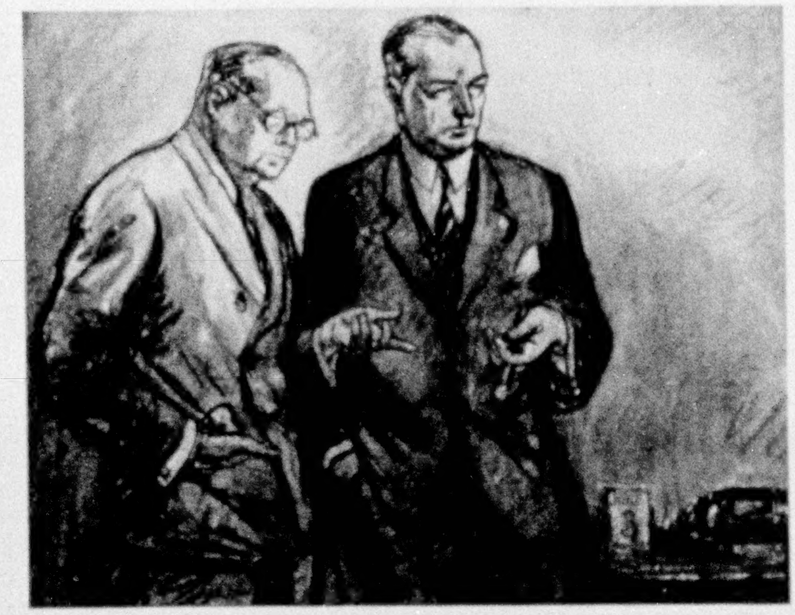
Forhan's for the Gums is more than an ordinary toothpaste. It is the formula of R. J. Forhan, D. D. S. It is compounded with Forhan's Pyorrhea Liquid used by dentists everywhere. You will find this dentifrice especially effective as a gum massage if the directions that come with each tube are followed closely. It's good for the teeth. It's good for the gums.

Forhan's *for the gums*

YOUR TEETH ARE ONLY AS HEALTHY AS YOUR GUMS

Overpaid at $100 a week

—*yet he should be earning* $10,000



IN looking over our records of the past twenty years we find that a very large proportion of men who enrolled for this service were receiving from $4,000 to $7,500 at the time they enrolled. A hundred dollars a week is perhaps the most common figure.

Many of these men were overpaid at $100 a week. By that we mean that their employers easily could have substituted younger men for them at smaller salaries.

Yet these same men who were overpaid at $100 a week are now, in many cases, earning four and five times that much.

These records suggest two very interesting conclusions:

1. When a man begins to earn from $4,000 to $7,500 he becomes conscious for the first time of his own opportunities and his limitations. He begins to taste the possibility of real money. Yet he realizes what a great gap lies between him and the heads of the business. He begins to look around eagerly, wondering whether there is any service, any help, that can carry him across the big gap.

2. It is amazingly easy to transform a $100-a-week man into a $10,000 man. So little is required that the wonder is that more men do not avail themselves of the opportunity. The difference between a modest salary and a good salary is not entirely a matter of brains. Not a matter of pull. Not even a matter of long experience.

Often, by using the Institute Service in only a very small way, a $100-a-week man has found all that he needed. Many have never completed the Course at all, but merely used the volumes and lectures, and the personal consultation service, as occasional helps when the need arose. In case after case the impressive thing is that very little was required to give a man the extra assets that he required.

To men earning between $4,000 and $7,500 a year

We should like to hear, either by personal letter or by coupon, from those who feel that there is a gap between them and the really big rewards of business. We will answer very frankly. It is to our advantage not to have any man enroll for this service unless it can help him very much and very quickly and at very small comparative cost.

A story that is a warning

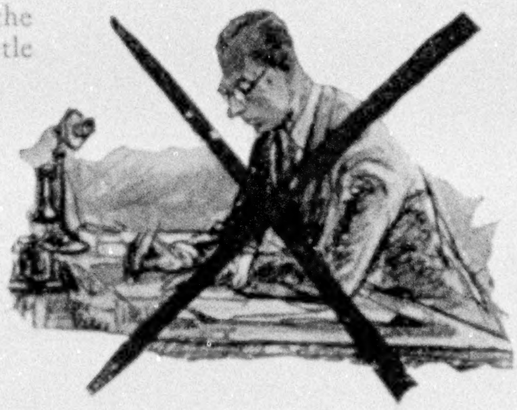
IN every big corporation there are men of 35 or 40 who started work there when they were boys. They have 20 years or so of loyal service to their credit; now they are getting $100 a week.

From one standpoint these men have done well. Yet theirs is the most dangerous position in all business.

We know one such man personally. For years he had been getting regular increases. He felt he was getting ahead. Then suddenly the president brought in an efficiency engineer. There was a general housecleaning; the hundred-a-week man went out. And his place was filled by a youngster just out of college who is now doing the same work for $40 a week.

The old-timer hadn't grown with the company. At 40 he was let out of an overpaid position when he should have been at the threshold of his career.

For men vitally interested in bridging the gap between $100 a week and $10,000, we have prepared a little booklet called "Forging Ahead in Business." The coupon will bring it.



ALEXANDER HAMILTON INSTITUTE
951 Astor Place, New York City
Please send me the latest edition of "Forging Ahead in Business," which I may keep without charge.

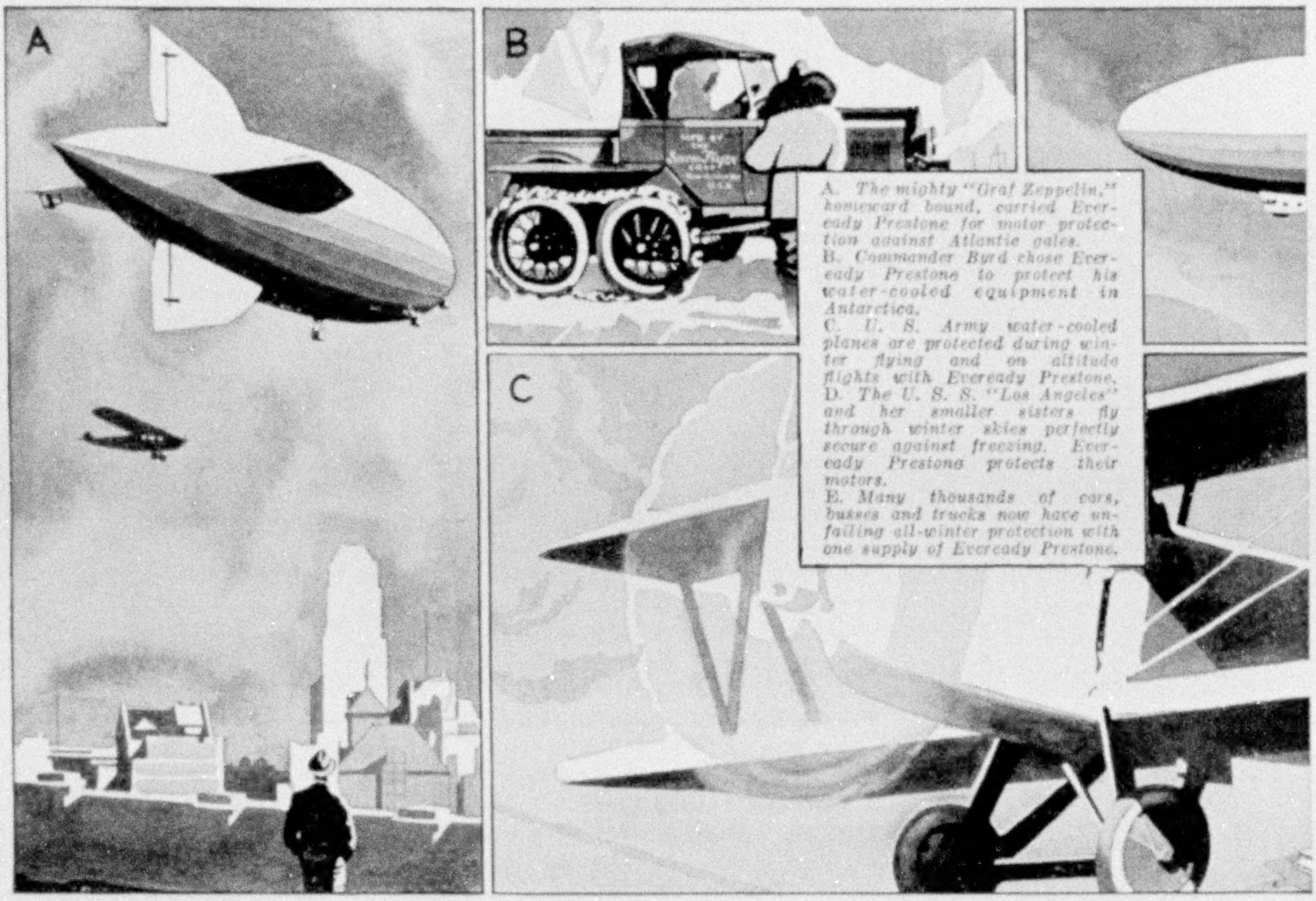
NAME...

BUSINESS ADDRESS...

....

BUSINESS POSITION...

«THROUGH THE SKYWAYS ON THE HIGHWAYS» AT THE BOTTOM OF THE WORLD



A. The mighty "Graf Zeppelin," homeward bound, carried Eveready Prestone for motor protection against Atlantic gales.
B. Commander Byrd chose Eveready Prestone to protect his water-cooled equipment in Antarctica.
C. U. S. Army water-cooled planes are protected during winter flying and on altitude flights with Eveready Prestone.
D. The U. S. S. "Los Angeles" and her smaller sisters fly through winter skies perfectly secure against freezing. Eveready Prestone protects their motors.
E. Many thousands of cars, busses and trucks now have unfailing all-winter protection with one supply of Eveready Prestone.

THE unfailing, harmless protection against frozen motors provided by one supply of Eveready Prestone has won for this perfect anti-freeze the highest endorsement wherever it has been used. When giant dirigibles take the air in winter weather, when a water-cooled Army plane ventures into frigid altitudes, when motors must operate in the intense Antarctic cold, Eveready Prestone is the first thought for protection. It possesses *all* the properties which the National Bureau of Standards has pointed out as essential for an anti-freeze.

Safest, most economical

The discovery of Eveready Prestone has given every motorist the opportunity to discard freezing worries. One supply of this perfect anti-freeze will keep his car in complete safety, *all winter,* no matter how soon it is put in the car or how long winter lasts. Its unfailing protection makes it unnecessary to buy Eveready Prestone more than once—a single investment provides certain, harmless, all-season insurance against any possibility of a freeze-up.

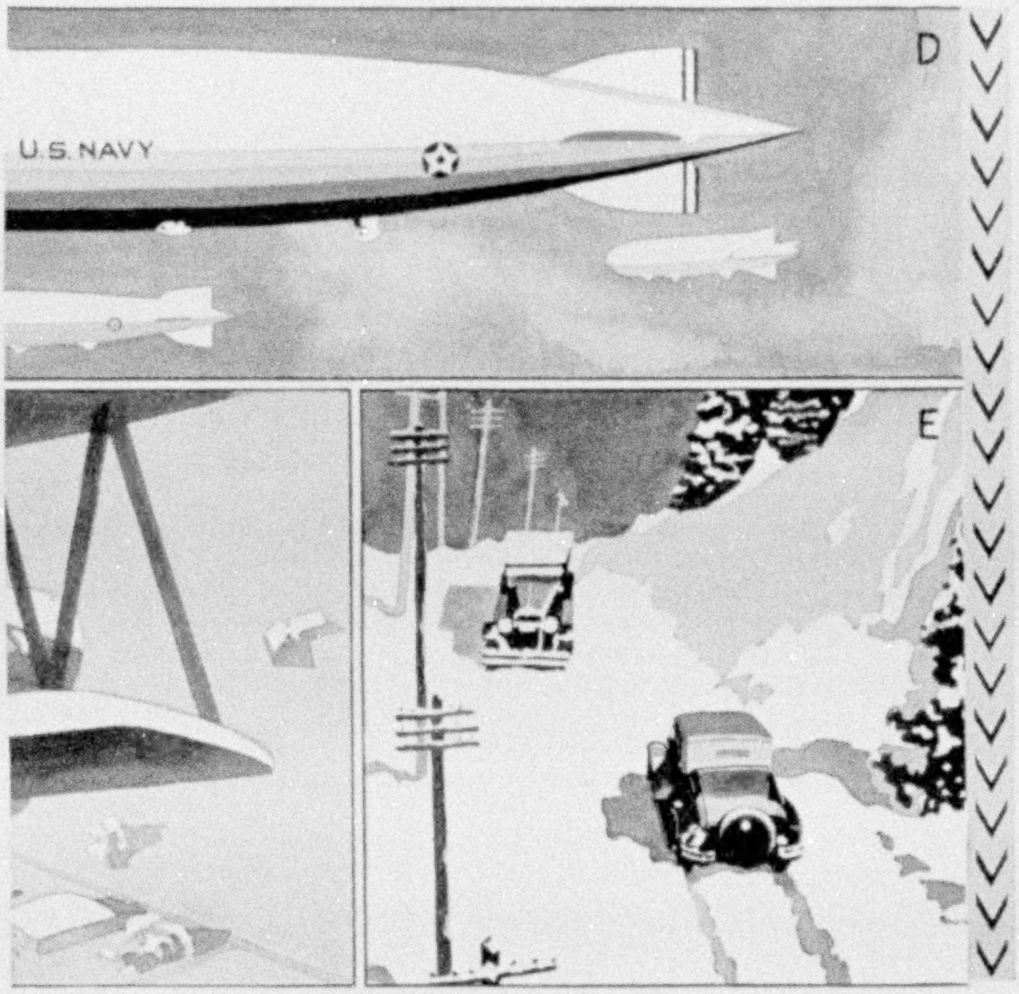
Prepare your car

It is time now to have Eveready Prestone in your automobile. Before you add anti-freeze, however, be sure your car is *ready* for winter. Cold-weather driving demands free-flowing, winter-grade lubricants in crankcase, transmission and differential. Battery, spark plugs and ignition cables ought to be at their best. The all-important cooling system should be in perfect order.

« EVERYWHERE THAT MOTORS OPERATE IN FREEZING TEMPERATURES YOU WILL FIND THIS PERMANENT, TRUSTWORTHY PROTECTION »

EVEREADY
PRESTONE
THE PERFECT ANTI-FREEZE

Eveready Prestone does not contain any alcohol or glycerine.



9 POINTS
OF SUPERIORITY

1 Gives complete protection.
2 Does not boil off.
3 Positively will not damage cooling system.
4 Will not heat up a motor.
5 Circulates freely at the lowest operating temperatures.
6 Will not affect paint, varnish or lacquer finishes.
7 Non-inflammable.
8 Odorless.
9 Economical—one filling lasts all winter.

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EVEREADY PRESTONE

(TRADE-MARK REG.)

FOR PREPARATION OF THE

PERFECT ANTI-FREEZE

Have the radiator and water-jacket *clean* and *tight*—see that all of last summer's collection of scale and rust is flushed out. Vibration and jar tend to loosen joints and hose connections. Make certain that these and all pump parts, gaskets, drain cocks and radiator are absolutely free from leaks. Then add water and one purchase of Eveready Prestone, and your car will be ready for all winter.

Any garage will render this service at small cost

Your car needs this simple preparation and a supply of Eveready Prestone *right now*. Don't put it off until freezing weather forces you to find protection. This perfect anti-freeze is not affected by warm-weather driving. Eveready Prestone is an entirely different anti-freeze that contains no alcohol or glycerine. It is sold in *pure, undiluted* form, and because of its efficient protective qualities one to two gallons, depending on radiator capacity and lowest temperature encountered, is enough for most makes of cars. It is the sure, economical protection that wise motorists are buying now. *You can get Eveready Prestone at any garage, filling station, automotive supply store or hardware store. See about it today.*

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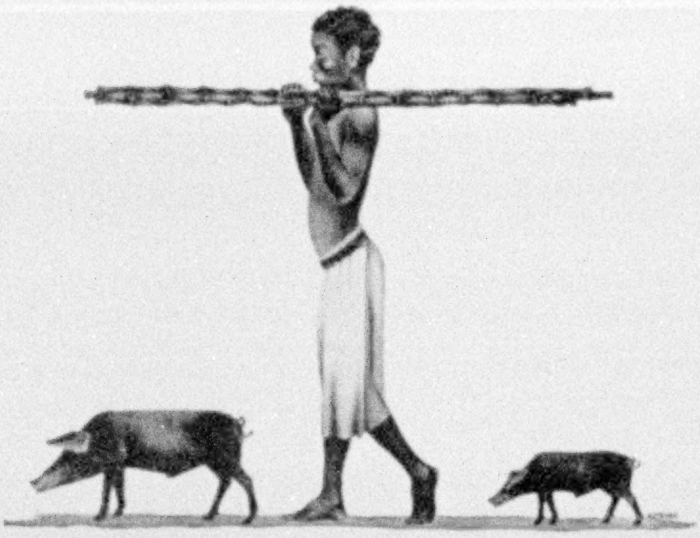
Unit of Union Carbide UCC *and Carbon Corporation*

To break the back of a long winter . . . a Cunard-Anchor West Indies Cruise



Ten cruises of varying length from 8 to 26 days. An excellent way in which you can economically exchange the depression of winter for sun . . . for gaiety . . . for continental life done up in the golden wrapping of the tropics. Switch your summer vacation to winter and follow the sun! Revel in the color of sun-splashed ports . . . of golf in Nassau . . . swimming in Bermuda . . . dancing in Havana. Substitute a charming chintz-hung Cunard stateroom . . . Cunard vacation genius . . . Cunard service, for traffic jams . . . heated rooms . . . subway skirmishes. Invest in the sun via Cunard and draw nerve-relaxing, joy-inspiring dividends for all the rest of the year.

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Dec. 18, "	s.s. Carinthia	16 days	200
Dec. 21, "	s.s. Franconia	16 days	200
Dec. 26, "	s.s. Caronia	8 days	175
Dec. 27, "	s.s. Carmania	9 days	175
Jan. 6, 1930	s.s. Carinthia	16 days	200
Jan. 16, "	s.s. Caledonia	26 days	275
Feb. 15, "	s.s. Caledonia	26 days	275
Mar. 15, "	s.s. Caledonia	18 days	200
Apr. 12, "	s.s. Samaria	12 days	175

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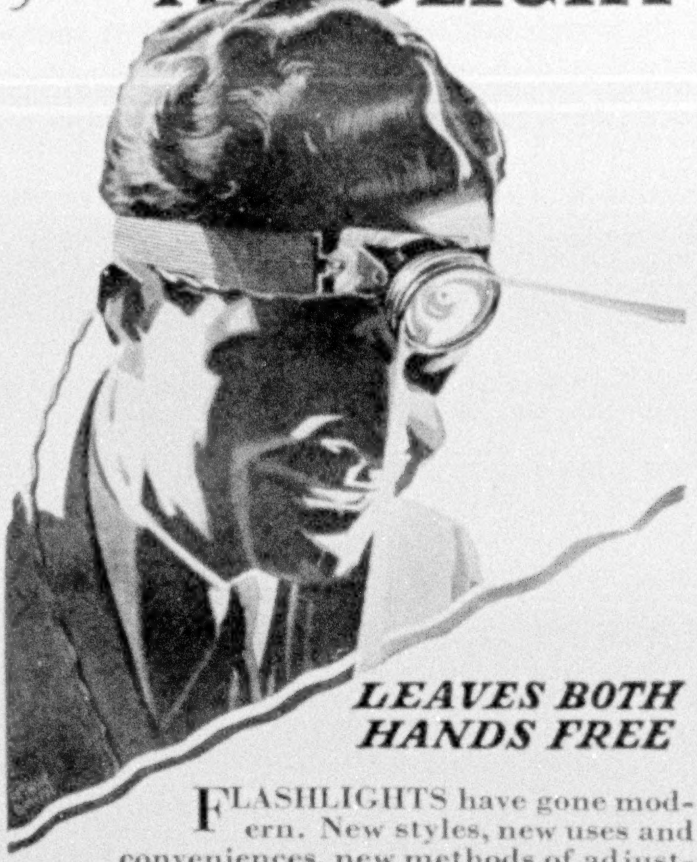

FLASHLIGHTS have gone modern. New styles, new uses and conveniences, new methods of adjustment and a new range of power now meet all modern needs. Winchester, in short, is pioneering in the flashlight field just as, more than sixty years ago, it began to pioneer in the making of fine guns.

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Focusing—360-ft. range -
(Batteries Extra)

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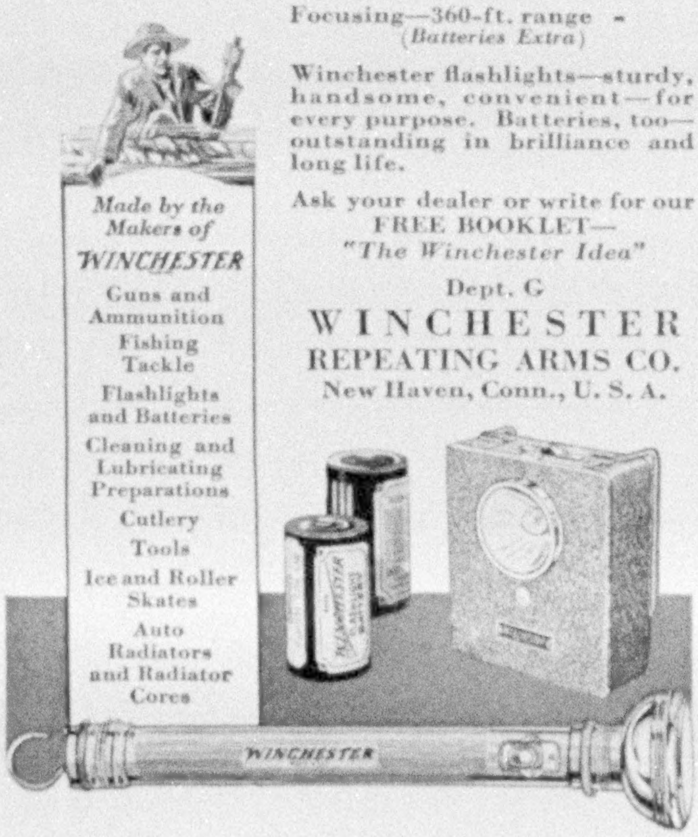

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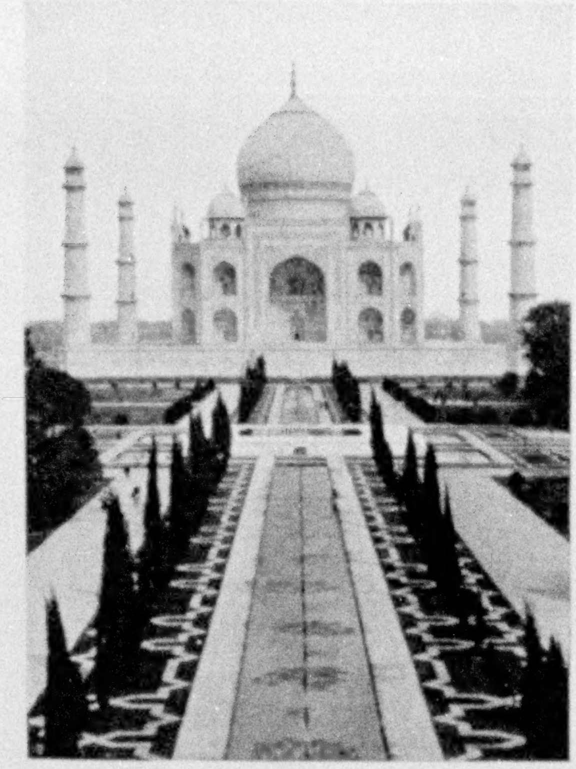

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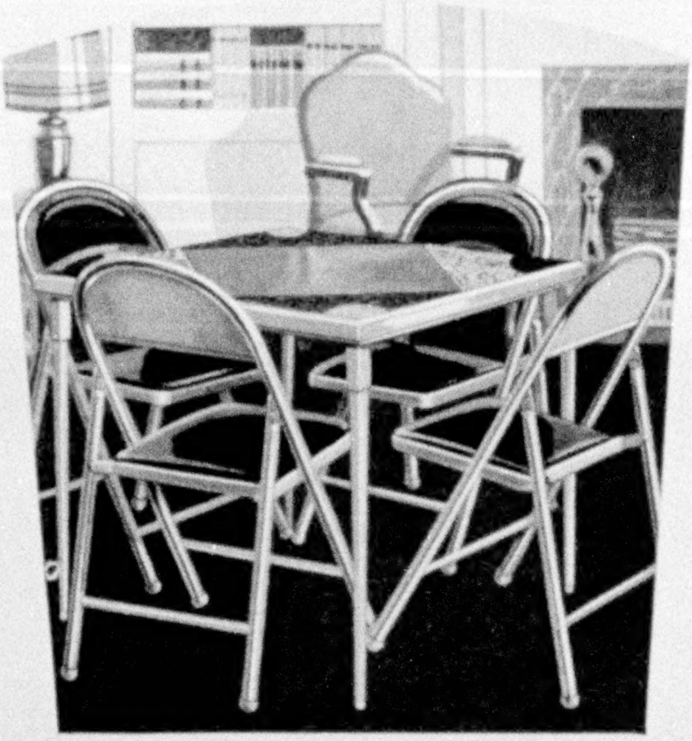

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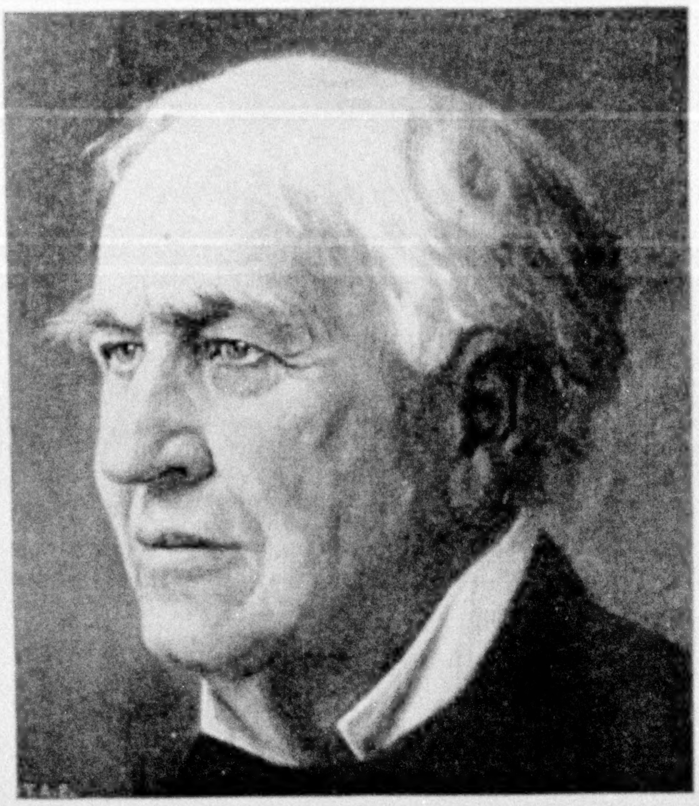
When Thomas Edison *groped in the dark*



IN 1859 Edison was a newsboy on the trains in and out of Detroit. He spent every hour he could spare in the public library "grappling bravely with a certain section, and trying to read it through consecutively, shelf by shelf, regardless of subject."

Admirable determination! Edison was destined to be well read, just as he was destined to become the greatest inventor of all time. But his early desire for fine reading was a blind groping in the dark. The books in a modern public library would take fifty lifetimes to read!

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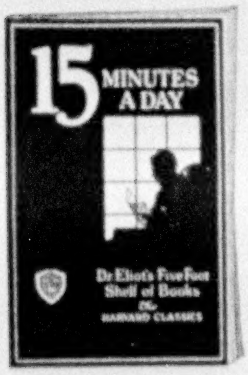

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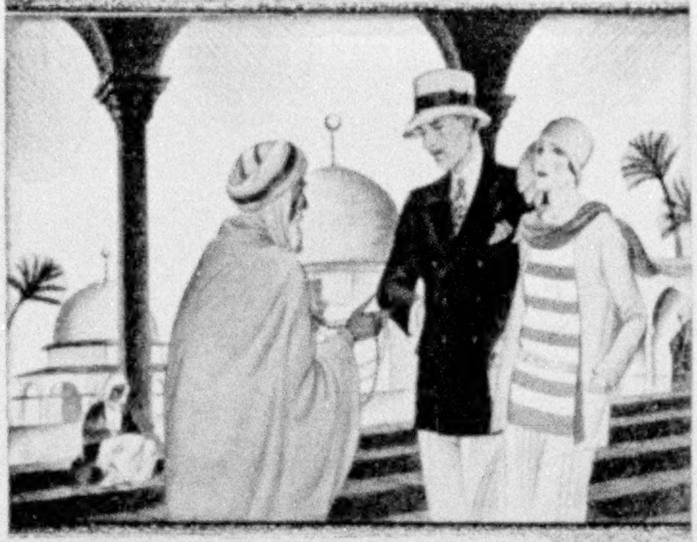

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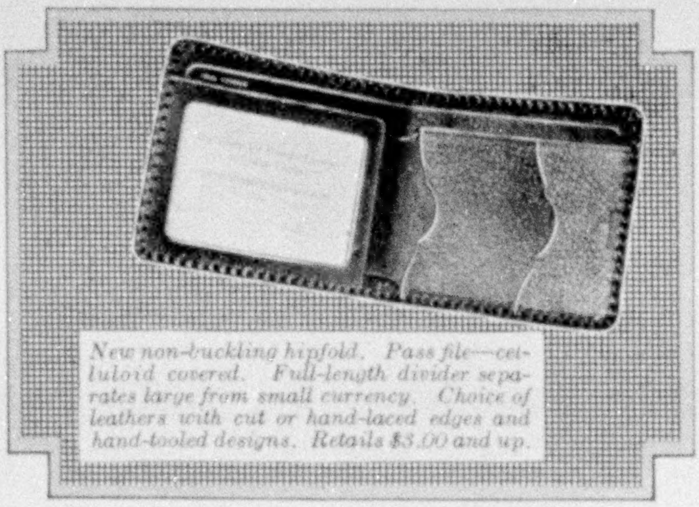

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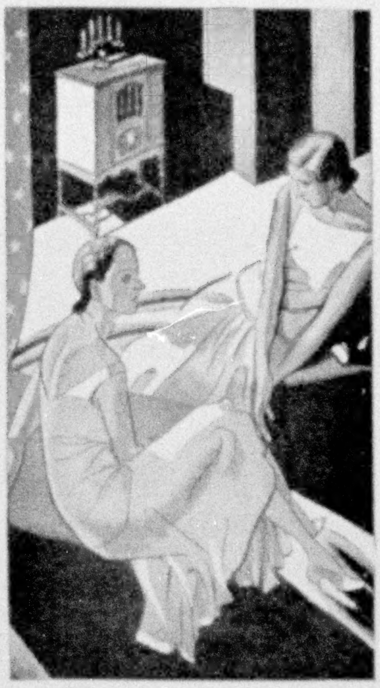

SO REAL

she stole away on tiptoe

JUST the other day we heard of a woman who stopped at a friend's to call. She was about to ring the door bell when she heard unfamiliar voices within. After listening a moment she tiptoed away, saying to herself: "They have guests; I'll call some other time." Guests? Yes, indeed—*but they were in a broadcasting studio far away.* Such is the reality—the *un*-mechanical perfection of true-to-life Atwater Kent tone!

On the Air: Atwater Kent Radio Hour, Sunday Evenings, 9:15 (Eastern Time), WEAF network of N. B. C. Atwater Kent Mid-Week Program, Thursday Evenings, 10:00 (Eastern Time), WJZ network of N. B. C.

ATWATER KENT RADIO

SCREEN-GRID

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Write for illustrated booklet of Atwater Kent Radio

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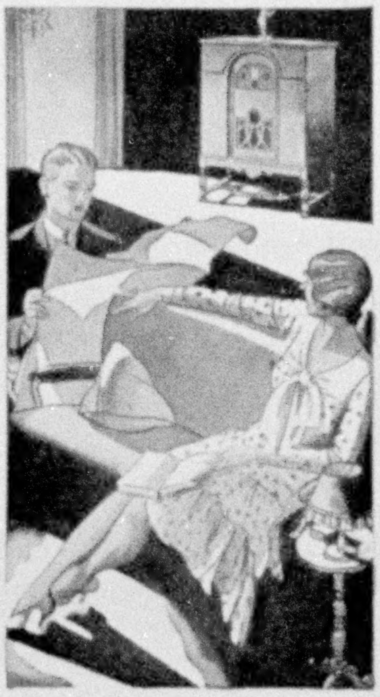

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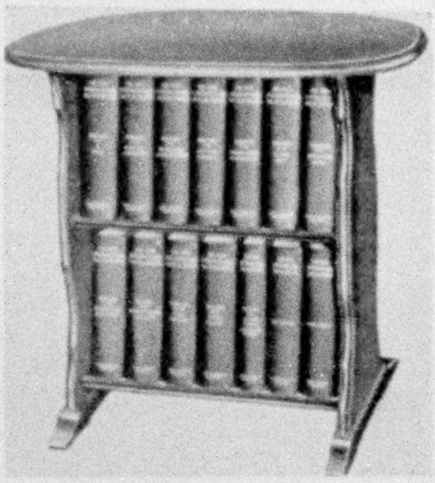

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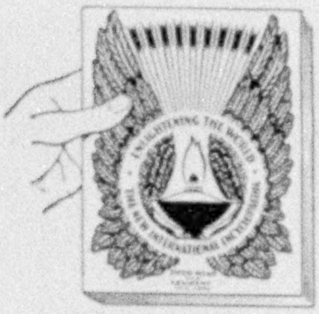

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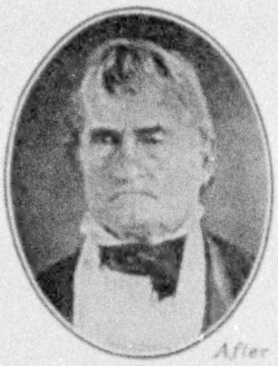

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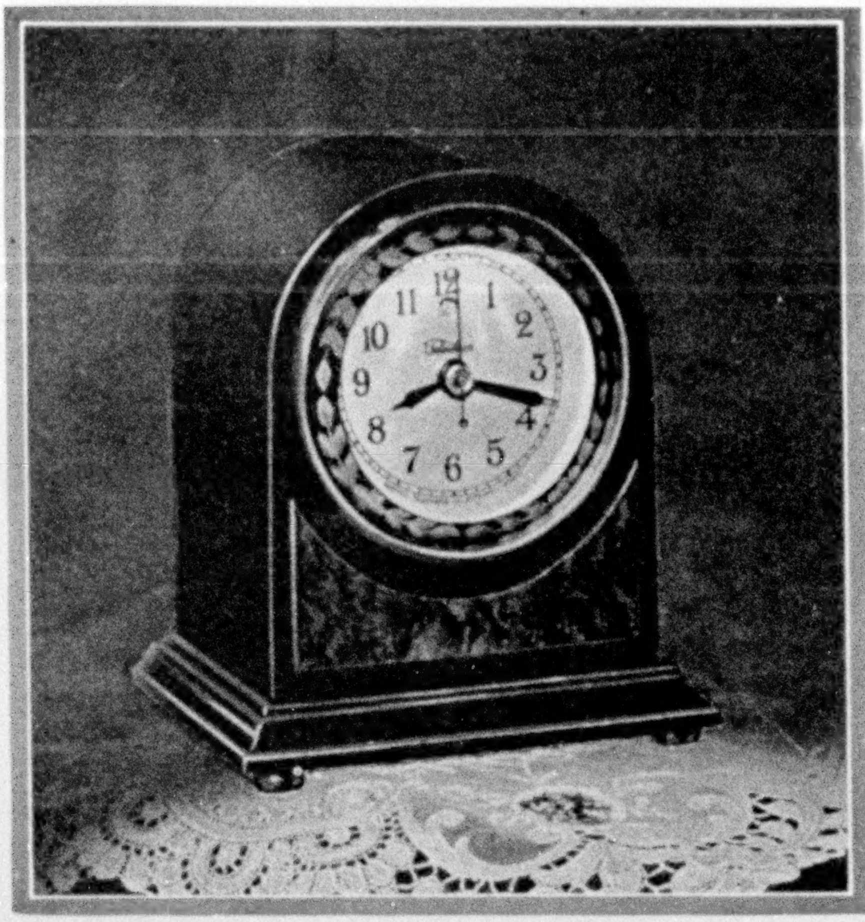

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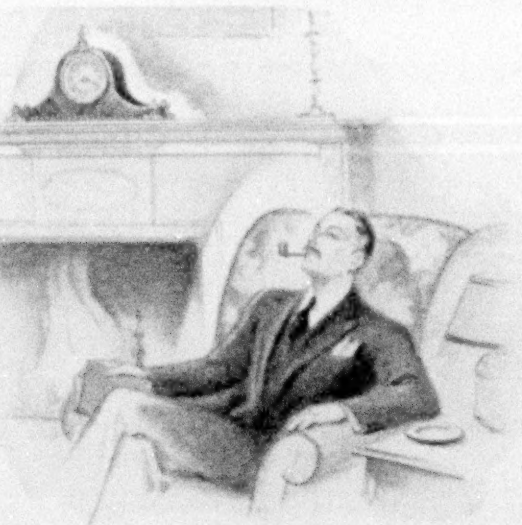

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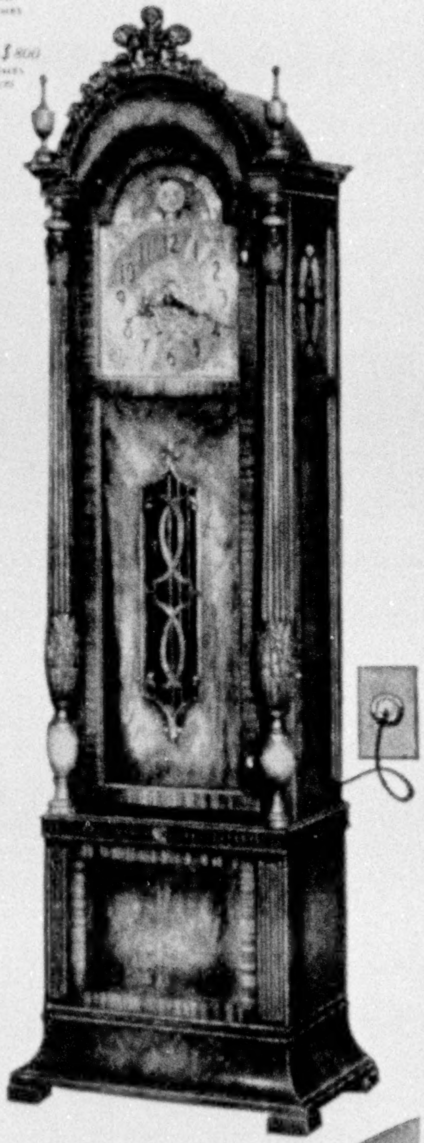

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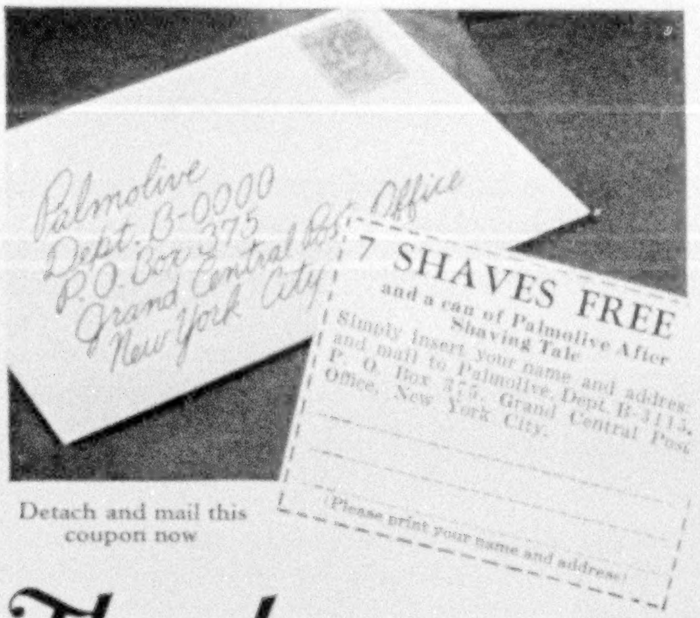

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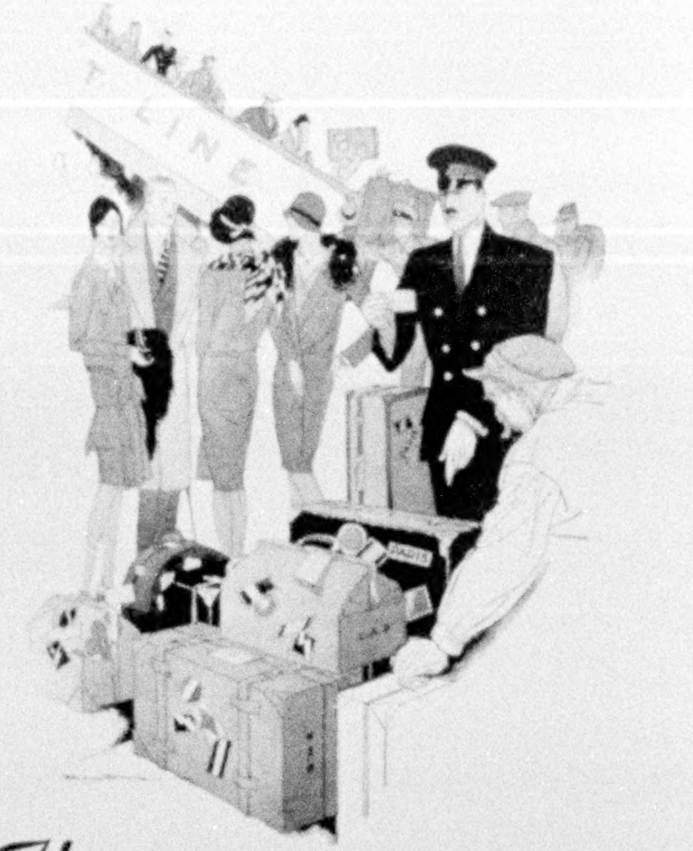

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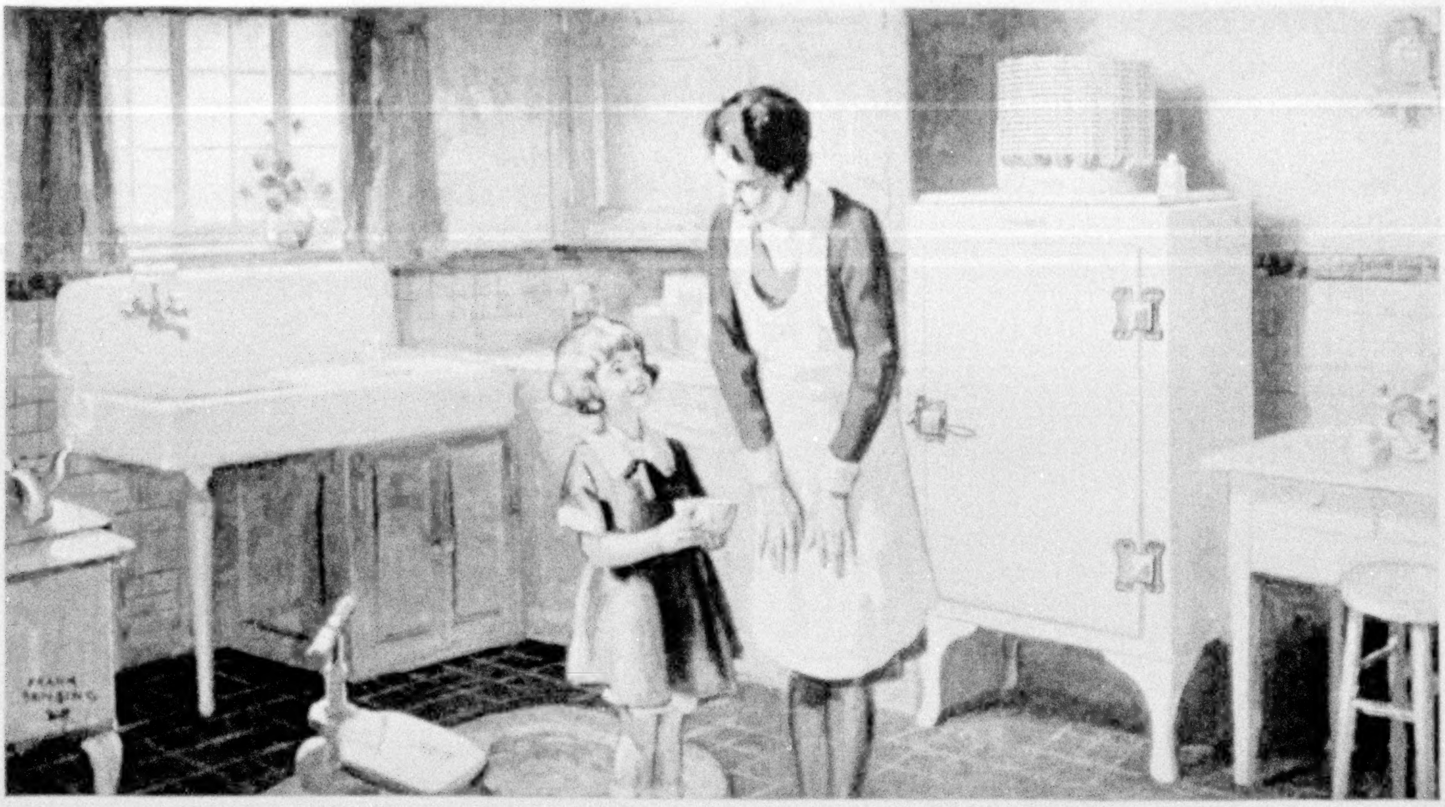

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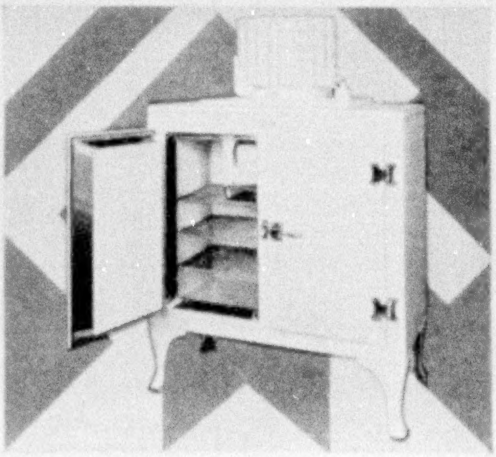

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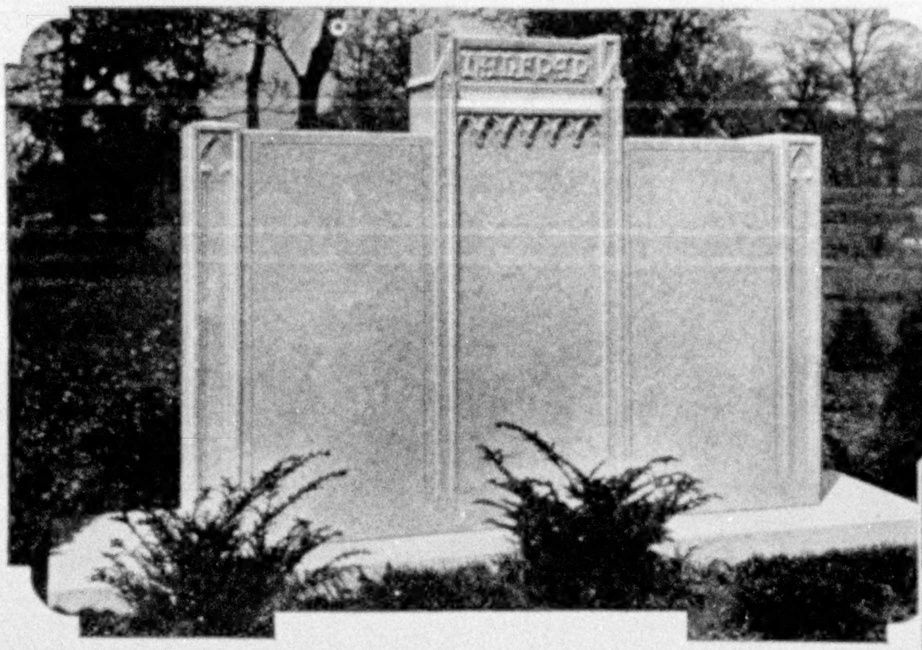

At left—An exquisite design in St. Lucas Cemetery, Chicago, Ill. Copyright by the Dodds Granite Company.

Below—Rugged refinement is expressed in the Fellows Mausoleum, Woodlawn Cemetery, New York City.

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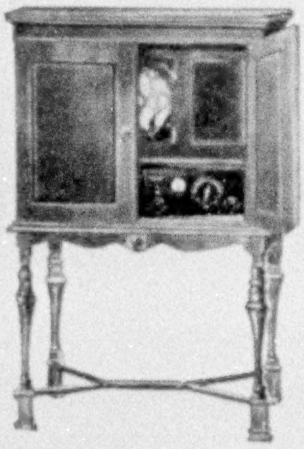

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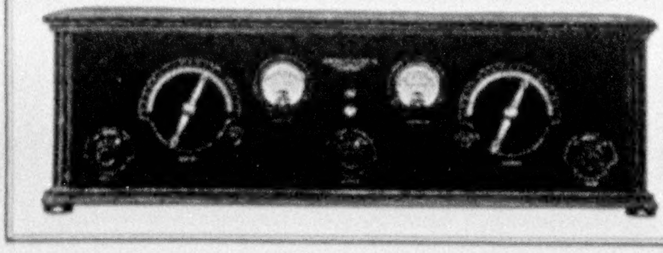

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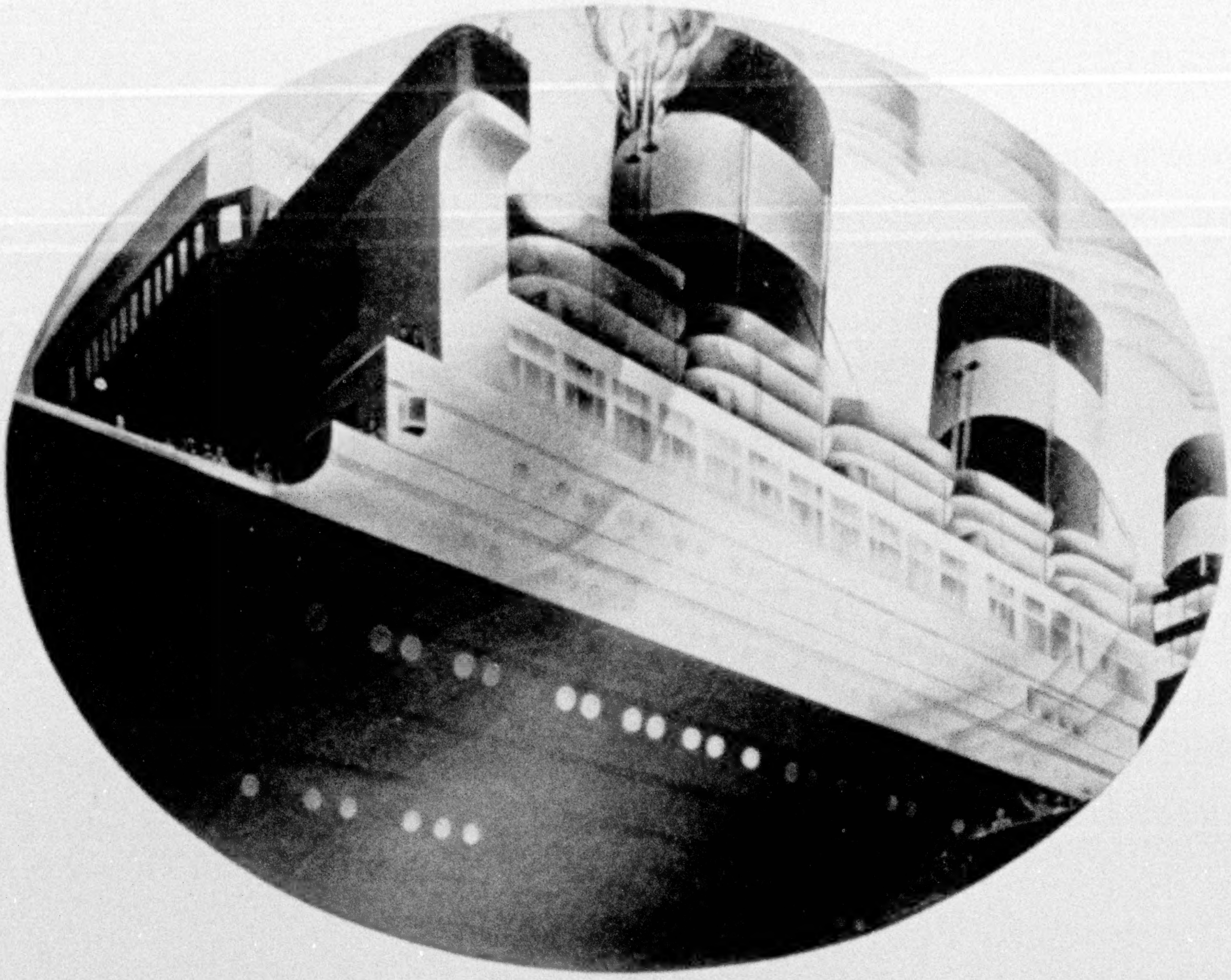

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It features the Finest Tulips, Daffodils, Hyacinths, Crocus, Lilies and other Miscellaneous Bulbs for Autumn Planting. Sent on request.

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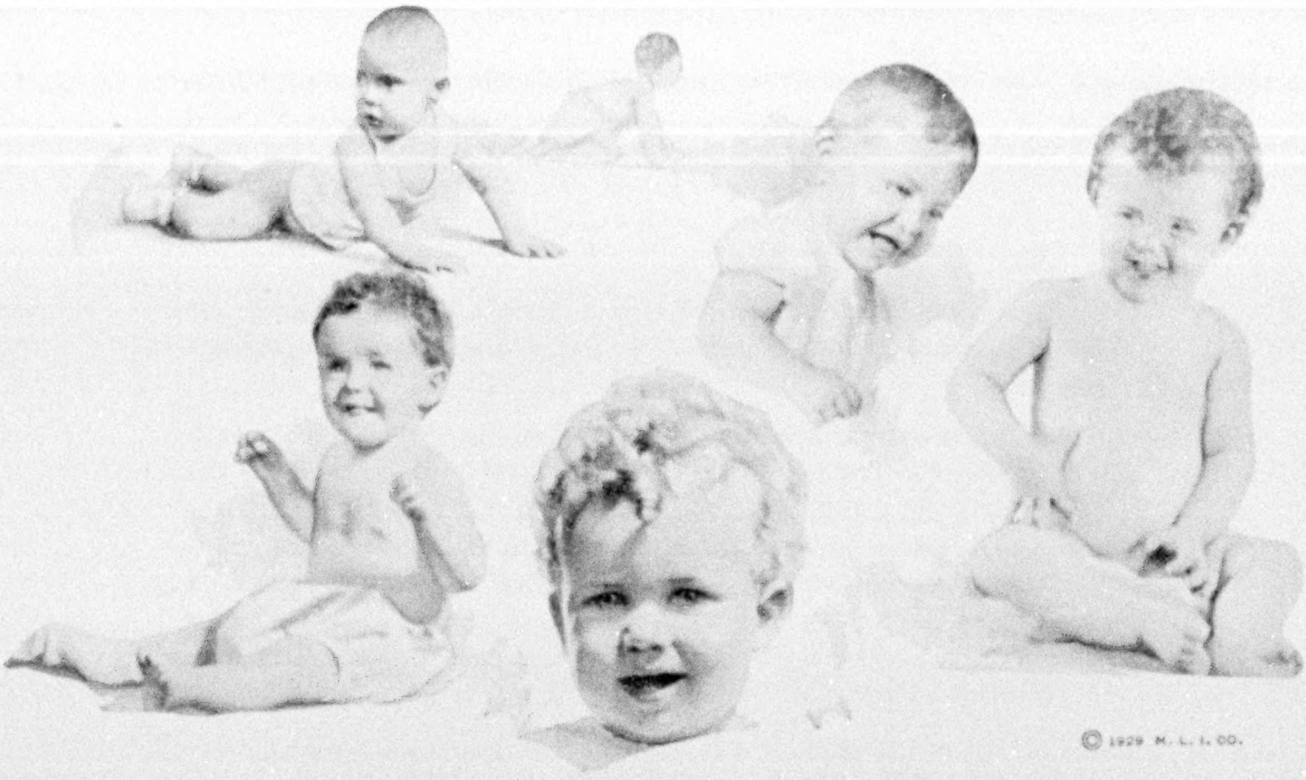
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Lucky Babies

LUCKY indeed is the baby who has a mother wise enough to follow the doctor's advice—"Bring the baby to me when he is six months old and let me protect him against diphtheria. That is one disease he need never have."

Last year more than 100,000 children who were not inoculated had diphtheria. About 10,000 of them died—an average of more than one every hour of every day in the year.

Will 10,000 innocents be sacrificed next year because some doctors have failed to warn mothers or because mothers have forgotten their doctors' warning?

THE LIGHT THAT NEVER FAILS

Even when diphtheria is not fatal, it frequently leaves its victims with weakened hearts, damaged kidneys, ear trouble, or other serious after-effects. The majority of deaths from diphtheria are of little children less than five years old. If your child, so far unprotected, has not been stricken by this arch-enemy of childhood, your good fortune is a matter of luck—not precaution. If he is more than six months old, take him to your doctor without delay and have him inoculated.

Diphtheria can be prevented by simple, painless inoculation which is lasting in its effect. Call up your doctor now and make an appointment.

Prevention of diphtheria through inoculation with toxin-antitoxin should not be confused with *treatment* of the disease by means of anti-toxin. The latter is a cure—the former prevents.

This disease has practically disappeared in many cities where the people have backed their health authorities in preventing diphtheria by inoculation with toxin-antitoxin. But diphtheria finds its victims wherever people have been misled by false reports as to the alleged danger of inoculation or have not learned to seek the protection which inoculation gives.

The Metropolitan Life Insurance Company will gladly cooperate through its local managers, agents and nurses, with State or city authorities to stamp out diphtheria. Detailed reports showing how various cities organized their successful campaigns for "No More Diphtheria" will be mailed free of charge. Ask for Booklet 119-N.

METROPOLITAN LIFE INSURANCE COMPANY

FREDERICK H. ECKER, PRESIDENT ONE MADISON AVE., NEW YORK, N. Y.

Ten times more attractive

THE SMALL chocolates in the Prestige assortment are attractive, with their glossy coatings of chocolate in three shades. There is the creamy brown of the milk chocolate coating, the rich chocolate brown of the vanilla coating, the deeper tones of the semi-sweet chocolate. The graceful shapes and decorations make them little works of art.

But ten times more attractive, and candy-hunger compelling are the *centers*—that all-important part of a chocolate which is seldom seen.

When serving the Prestige Chocolates for dessert (on a silver dish) try the experiment of cutting the pieces in halves exposing the fruits, nuts, creams, caramels, nougats. All the coloring and richness one associates with the finest confections. Everyone recognizes the goodness of Whitman's but a feast for the eye is entirely overlooked unless one occasionally peeps inside, where we lavish so much care. On going beneath the surface Whitman's are *ten times more attractive.*

Whitman's PRESTIGE CHOCOLATES

In art metal chests (which will find constant use) holding one pound, two or three pounds. At $2.00 a pound.

On sale only at selected stores, each one of which is supplied with fresh and perfect candies, direct from Whitman's.

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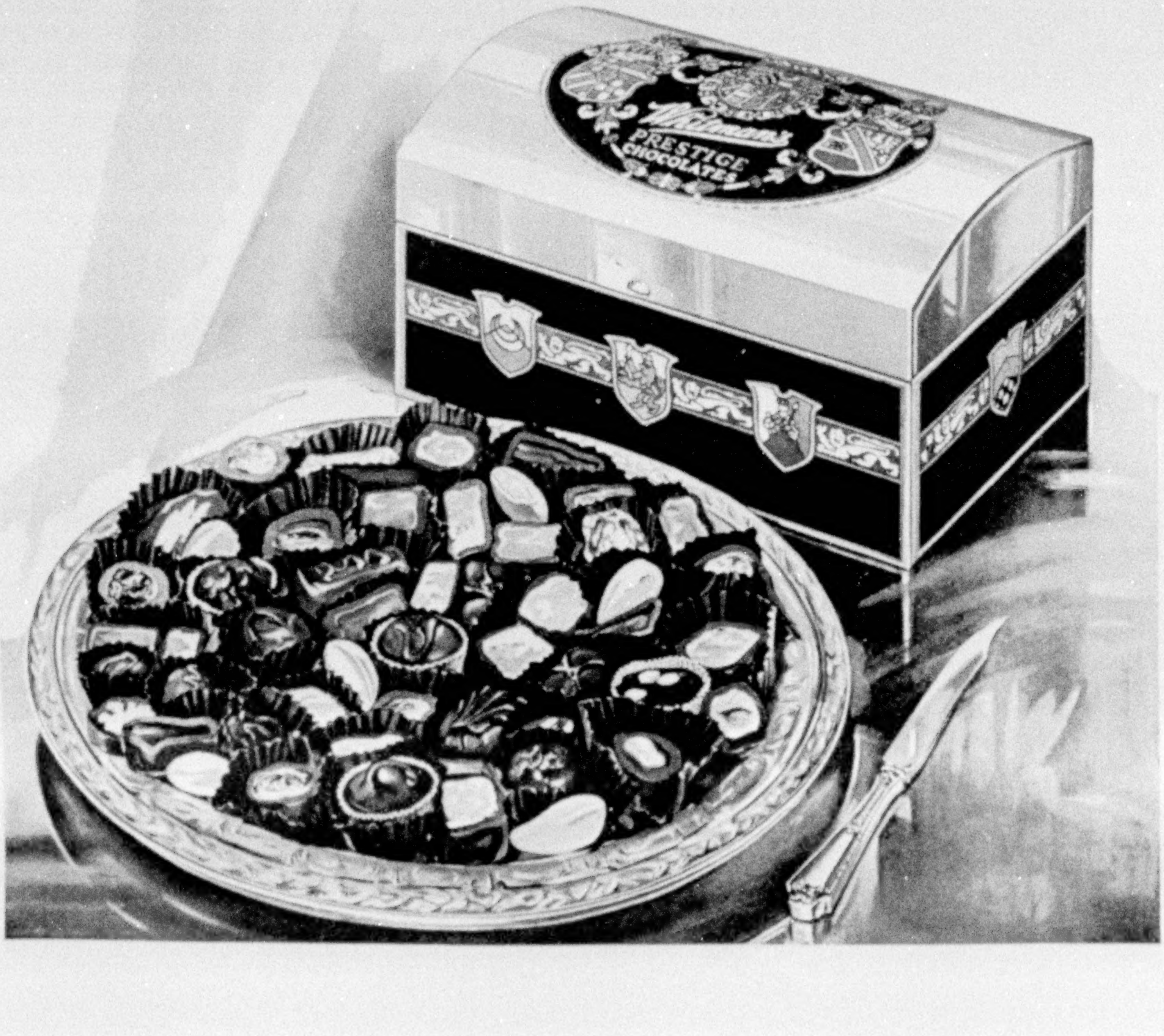

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ARMISTICE DAY AND THE AMERICAN BATTLE FIELDS

By J. J. Jusserand

Formerly Ambassador of France to the United States

"CEASE firing!"

All along the immense front held by the Allied armies on November the 11th, at 11 o'clock in the morning, the bugles sounded the notes, "Cease firing," confirming a telephonic message sent at dawn from Rethondes.

That hour, one of the most solemn in the history of mankind, was not rung from the clock of any steeple. There was no clock left at the front, no steeple.

The impression of all those present was a sort of stupor at the silence that succeeded. The roar of cannon, which, nearer or farther, had been continuously heard for years, was now hushed; clouds of smoke were no longer to be seen, poisonous gases were no more to be feared; immobility had succeeded to movement.

In the country around, silence, too. The sounds usually heard in the fields had long been hushed. No peasants were urging their oxen, no dogs were barking, no chickens cackling. In the ravaged region, there were no peasants at work, no oxen, dogs, or chickens.

The Armistice brought to an end the bloodiest war the world had ever known. The defenders of liberty, democracy, honest living among nations, had won the day.

Americans, to be sure, had not been for a long time in force at the front; but what deeds had they accomplished in those months! What invaluable help had they given at the worst period of the war, what renown gained for themselves and their country!

No one knew, before they were actually put to the test, what they would be able to achieve in such an unwonted crisis; they themselves did not know for sure. But, once resolved, they came wholeheartedly; they wanted their part to be the most brilliant possible, one that future generations would wonder at.

When asked whether they could, under a terrible fire, capture a certain ridge like the Blanc Mont, or clear a certain wood like the Bois Belleau, or cross a certain river like the Meuse, their answer was always, "We can," and they made good.

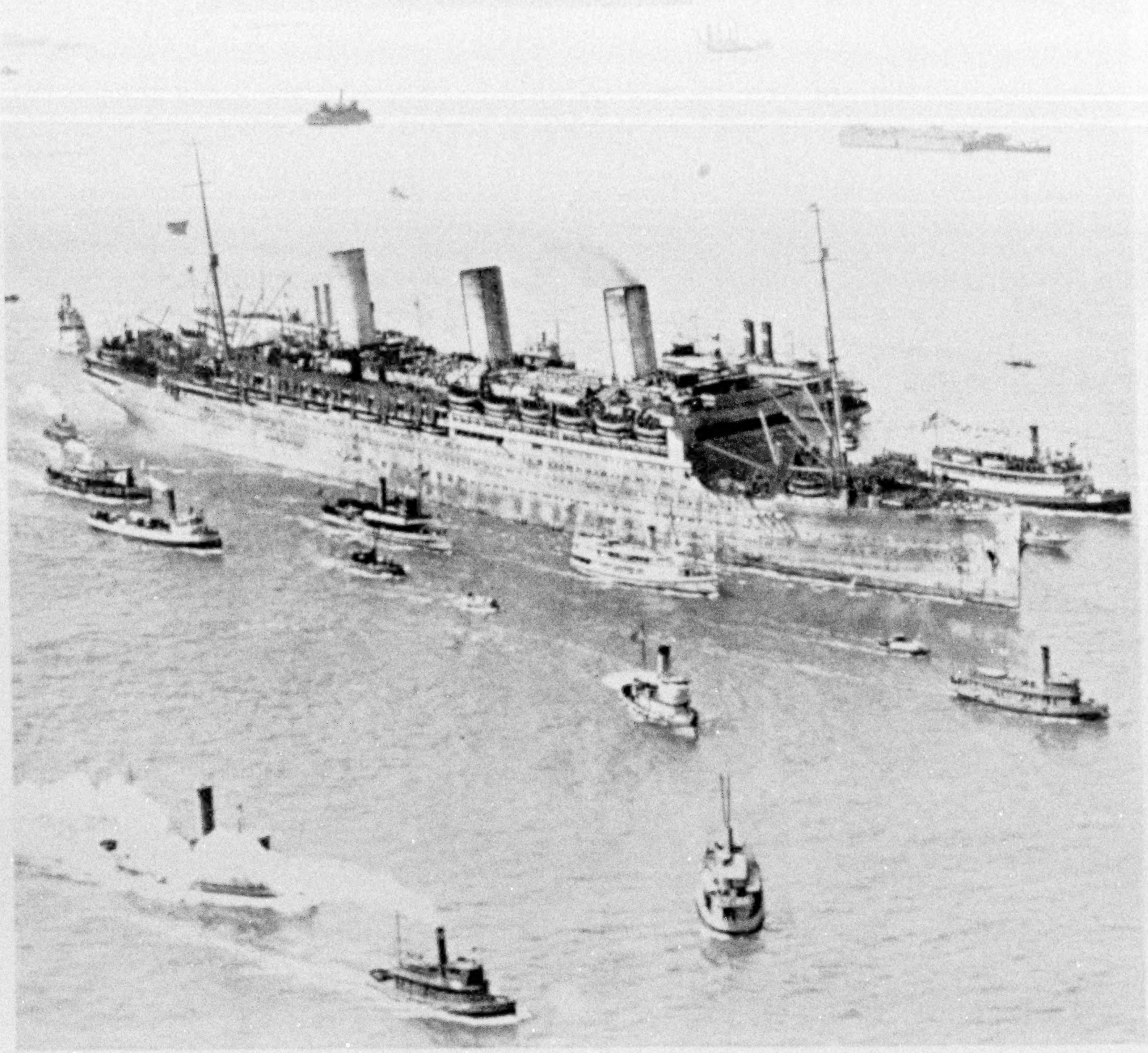
Mr. André Chevrillon, in his *Américains à Brest,* has well described this state of mind:

"They arrived with a determined will not to allow themselves to be defeated by anyone or by anything; to show themselves, on any occasion, stronger than the antagonist, than Fortune herself. With the American, the desire is ever present to beat records—all records, his own as well as those of others—the desire to surpass himself as well as the rest of the world."

"THE LAFAYETTES OF THE AIR"

When our training officers came to America to instruct in the use of the 75 and in trench digging, insisting on the importance of rapidity, some men, they told me, in order to be first, exerted themselves to such an extent that they fainted.

Volunteers had shown the way and made people understand what the American spirit was—a spirit in more than one



Photograph from International

AMERICA'S LARGEST TRANSPORT BRINGS A PRECIOUS CARGO INTO NEW YORK HARBOR

More than 2,000,000 troops were transported from the United States to Europe during the war. Of these, 101,217 went over on the *Leviathan* and nearly as many returned on the gigantic ship after the Armistice. The *Leviathan* is to-day in the transatlantic service.

respect not very different from the French, especially in a peculiar capacity for gaiety in the midst of danger. Death looks them in the face; they laugh at Death. Volunteers in the "Legion," volunteers in our aviation, those "Lafayettes of the air," as Mr. Roosevelt so aptly called them, and who, on the suggestion of Norman Prince, formed precisely what was called later the "Lafayette Escadrille"; young men who added to the danger for the fun of it and many of whom lost a life which they had sacrificed in advance: Victor Chapman, one of the earliest volunteers and the first to die; Rockwell; that same Norman Prince; McConnell; Genêt, who remembered his French ancestry and that he was a descendant of famous Citizen Genêt; Lufbery, who, in the intervals of his aërial exploits, was training a pair of young lions, a male and a female, to whom he had irreverently given the names of Whiskey and Soda; and a number of others who now sleep in the crypt under the noble monument erected to them by subscription near Paris (see pages 544, 545).

They would "deliberately amuse themselves by diving at the little smoke clouds" of the shots fired at them, or they would perform "an aërial fandango to bring out the enemy." Their story has been graphically told by their former chief, Major Thénault, later air attaché to my embassy, who has given an account of the prowess

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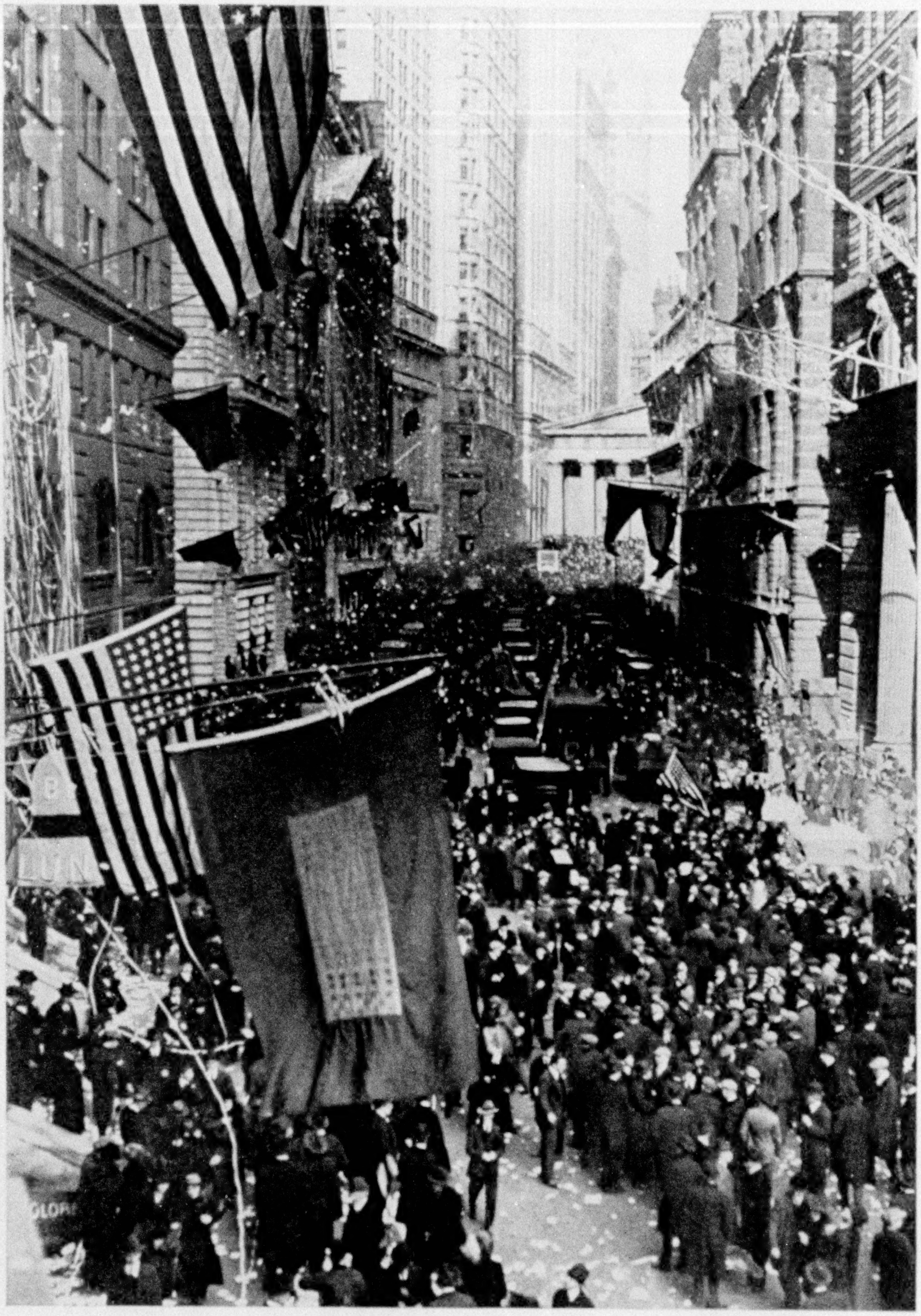
MILLING THOUSANDS ACCLAIMED SIGNING OF THE VERSAILLES TREATY

In the same magnificent surroundings where the "Grand Monarch" was wont to hold court, and where in 1870 Prince Bismarck dictated the terms which ended the Franco-Prussian War, statesmen of the victorious Allies negotiated the Treaty of Peace with Germany in 1919.

of each member of the Escadrille, with, let it be said to his credit, the sole exception of himself.

Their monument stands very impressive, with a background of old trees, and in the crypt a row of coffinlike stone tombs, all similar, with nothing but the names and dates. It was dedicated on the 4th of July, last year. The best beloved of all ambassadors, Myron T. Herrick, delivered the chief address. France was represented by the Secretary of War, Painlevé; Marshal Foch, General Gouraud, Military Governor of Paris; General Dubail, Grand Chancellor of the Legion of Honor, and, most moving of all, the survivors of the Escadrille were present, headed by their former chief, Major Thénault. A Catholic prayer opened and a Protestant one closed the ceremony, the latter by Bishop Manning, of New York.

When the ceremony was over a register was presented for the guests to sign. As Marshal Foch passed along without noticing the register, I drew his attention to it, saying, "You, of all men, should sign." He laughingly answered, "And not knowing how to sign, made a cross." "Make it, by all means," I could not help retorting, "and it will be a cross of honor."



Photograph from International

EVEN THE HEART OF COMMERCE SKIPPED A BEAT ON ARMISTICE DAY, 1918

Crowds in the canyons of Broad and Wall streets, lower New York, forgot finance and joined with the rest of the world in celebrating the termination of the war. Miles of ticker tape were flung out in streamers, like strips of crêpe paper at the New Year.

Photograph by U. S. Army Signal Corps

A PARISIAN CROWD CELEBRATES THE ARMISTICE

When the news became generally known that the agony of war at last was ended, the victory-mad crowd went wild with joy.

He, too, now lies in a crypt at the Invalides, beside another savior of France, Turenne.

THE SPIRIT OF YOUTHFUL AMERICA IN FRANCE

But now all America was following suit; her sons, coming in immense numbers from all parts of the country, young men of most varied origins (the American censor had to read letters written in fifty different languages), were imbued with the same spirit. Owen Wister has described, as he knows how, a landing of them at Brest:

"Upon this medieval mass emerges and pours the vigorous, raw, gay New World. It rises from the ocean like an apparition. Every atom of it expresses youth. It flows down the transports and enters the town. It pervades Brest. Youth radiant, youth perpetually clean-shaven, youth of a strange countenance and build, surging up from the horizon out of the west—soldiers, sailors, marines, engineers, mechanicians, constructors, organizers—wearing a garb and speaking a tongue from beyond the sea."

In spite of that strange tongue and of ours, which seemed as strange to them, they soon found themselves at home in the distant land of France. They were good fellows and met good fellows. They were astonished at nothing. Instead of blaming, swearing, giving up in the case of mishaps or mistakes, they devised means out of the difficulty.

This disposition they had inherited from their forefathers, the pioneers of old, who, too, astonished at nothing, disheartened by no obstacle, persisting in spite of failures, transformed wild, unkempt, useless, savage-ridden America, that "untamed continent," said Parkman, into a country of progress and beauty, of immense manufactures and immense gardens, of thought, of freedom, of bold experiments and discoveries. Those who had not this disposition by inheritance had caught it by contagion.

They were merry, ingenious, and kindly.

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THE FORMER FRENCH AMBASSADOR AND MME. JUSSERAND

For 22 years this gracious couple were known and beloved in the capital city of the United States. When Monsieur Jusserand relinquished his post in 1924, he was dean of the diplomatic corps and he and Madame had won for themselves a warm place in the hearts of the citizens of Washington.

When the peasant family upon whom they were billeted, in the regions where there were still peasants left, happened to be in trouble, they exerted themselves to remove the trouble, though it was not theirs.

This inclination to make themselves useful, whatever be the circumstances, was that of their whole nation, of their women as well as their men, of the members of those volunteer ambulances early organized at the French front by a typical American, former Assistant Secretary of the Treasury, A. Piatt Andrew, whose helpers, bent on saving other people's lives, paid so little attention to their own that they counted proportionately as many dead as the fighting regiments.

FRANCE REMEMBERS THE GENEROSITY OF AMERICAN WOMEN

The same with the innumerable works founded and sustained by women, like the American Fund for French Wounded; the aid for devastated France of Miss Morgan and Mrs. Dike; the help supplied by the Daughters of the American Revolution, who adopted more than three thousand orphans and gave a water supply system to Tilloloy; by the American Red Cross, the Y. M. C. A. and Y. W. C. A.; by Mrs. Crocker, who rebuilt Vitrimont; by Miss Belle Skinner, the good fairy of Hattonchâtel, and many others gratefully remembered, so numerous that a list of them would fill pages.

"The courage of her soldiers," said General Gouraud in one of his addresses, "is not the only help which has come to us from America. She has given us also the devotion and generosity of her women."

Such displays of character and, more than all, American cheeriness went to the French people's heart. General Berdoulat, of our army, told me that during the severe fights around Château-Thierry he had with him American troops ably commanded by General Bowley. He felt one day that they must, after hard fighting, be exhausted and he phoned to the general: "In the course of the afternoon, you will rest and be relieved."

General Bowley phoned back: "Impossible! A question of probity. I have here a quantity of German shells; I must return them to their owners." "One," continued General Berdoulat, "who in the midst of a hard battle can make such an answer is not merely a comrade in arms, but a friend, a brother, to love till you die."

I was once telling this anecdote in the presence of the architect of the Woolworth Building and many other famous monuments, Mr. Cass Gilbert, who said: "I know something of this. The American contingent had captured an enemy battery with its ammunition, and it was my son, serving then as an artillery officer, who was entrusted with the care of supervising the return of the shells to their owners."

Photograph by P. & A., courtesy American Legion Monthly

DISCIPLES OF FRANCO-AMERICAN GOOD WILL

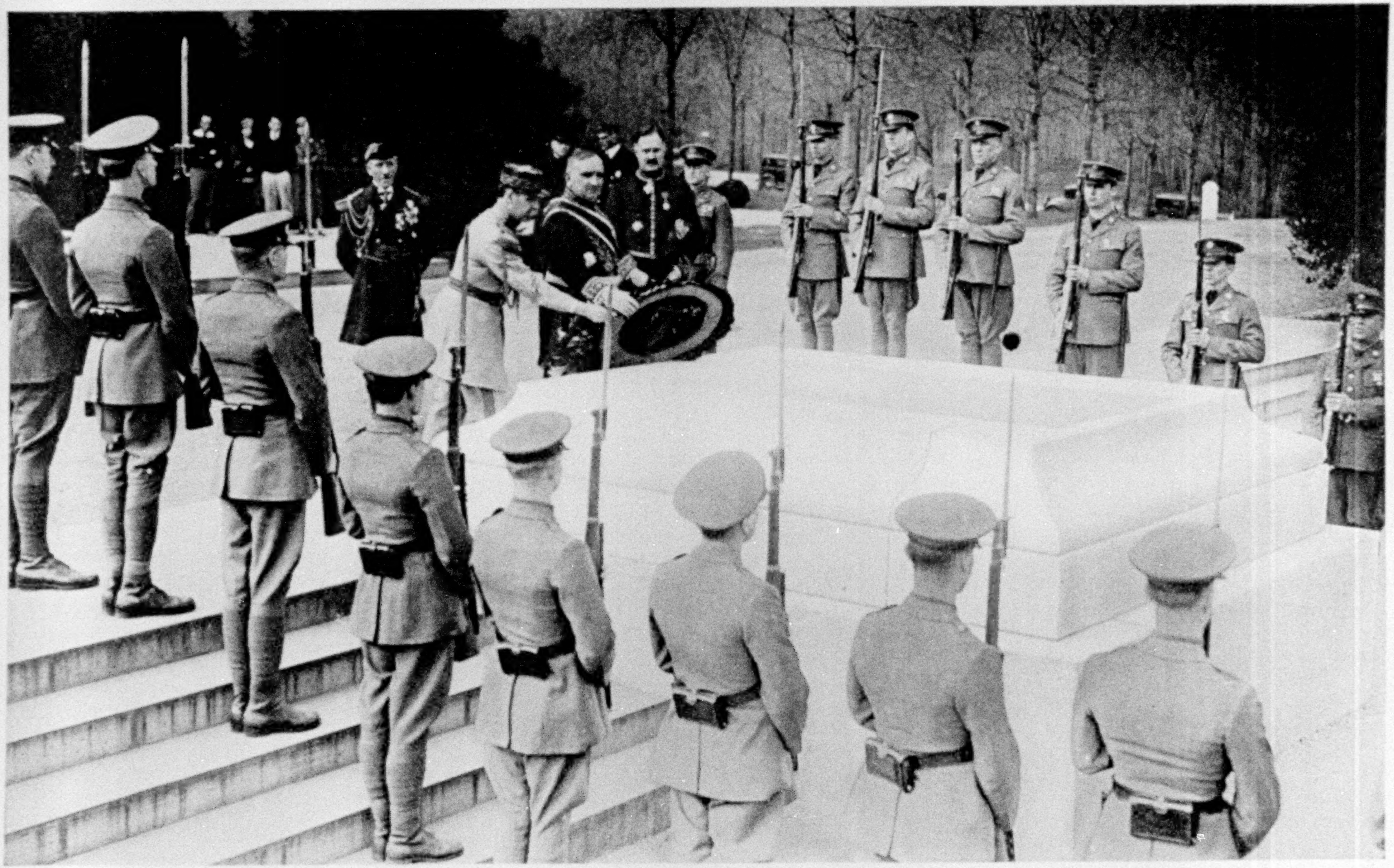
Marshal Ferdinand Foch, Generalissimo of the Allied Armies (left), and Ambassador Myron T. Herrick, long the beloved envoy of the United States to France. Both of these great men have recently passed forever from the stage of human affairs, but the influence they wielded will long be felt.

In our military training schools, again, where some went to study; in our universities, where a number of them followed courses, I have it from the rectors of several such universities, young Americans endeared themselves to their French comrades by those same appreciated qualities of good will, good fellowship, and cheeriness.

NATURE HELPS MAN HEAL WAR'S WOUNDS ON THE FIELDS OF FRANCE

The deeds, done with a spirit without which Foch's tactics would have been impossible, will ever be remembered in France, whose fields will long bear marks of the terrible contest fought out there.

Man has since pluckily done his work, leveling trenches, removing obstacles, rebuilding houses, sowing fields; and Nature, with her hatred of death and ugliness, has grown plants and wild flowers, and has wreathed with her smiles places where human beings had fallen by the thousands, bathed in blood. Mr. Gervais Courtellemont's autochromes give an idea of what the land now looks like, and show how, in the midst of those flowers and smiles, one comes suddenly upon grim reminders of the great fight—wire entanglements slowly rusting *in situ,* houses with



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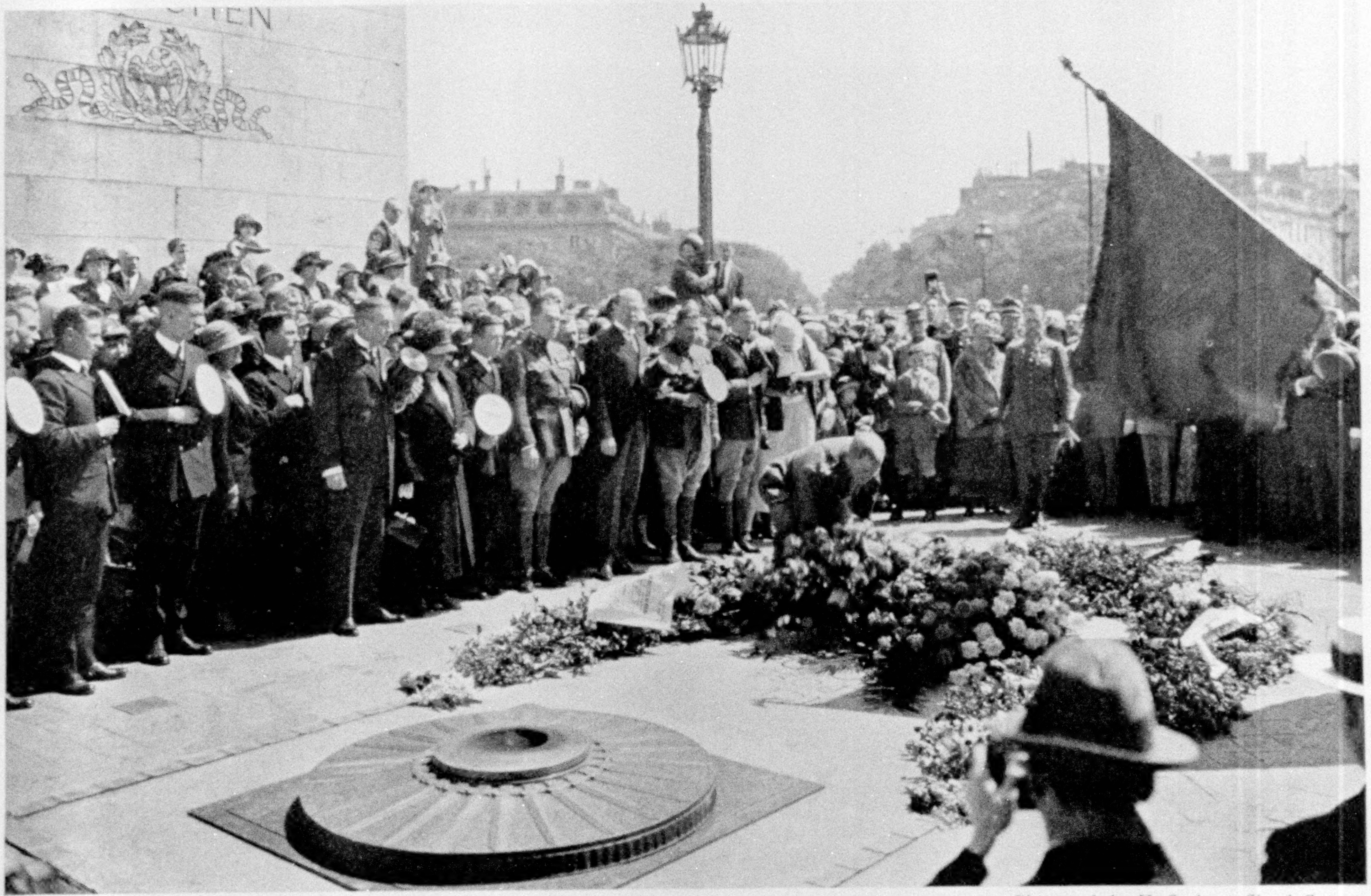
FRANCE PAYS HOMAGE TO AMERICA'S UNKNOWN SOLDIER

Ambassador Claudel, for the French people, is shown here laying a wreath on the tomb of the warrior dead in Arlington National Cemetery. It seems a fitting tribute to those who gave their lives that each of the Allied powers has dedicated a similar shrine.



Photograph by U. S. Army Signal Corps

NO SPOT IN FRANCE IS MORE REVERED THAN THE TOMB OF HER UNKNOWN SOLDIER

General Pershing is seen here placing a wreath on the grave beneath the Arc de Triomphe. The eternal flame in the circular brazier to the left of the flowers burns like the unquenchable spirit of the warrior dead.

Photograph by Ewing Galloway

BENEATH THE ARC DE TRIOMPHE LIES THE UNKNOWN SOLDIER OF FRANCE

No more fitting place could be found for the warrior's tomb than the Place de l'Étoile, where rears the magnificent monument to the glory of the country for which he died.

their gaping wounds still open, dugouts untouched, guns left where they were, in fields or forests, amid the crops or under the leaves of renascent Belleau Wood.

Such sights may be seen, for instance, at Cantigny, where the First American Division achieved glory (and the inhabitants now enjoy a restored water system, gift of the National Geographic Society*); at Château-Thierry and Bois Belleau (June 4, 1918), where the famous Marines surpassed themselves, adding those names to the proud, joyous song which, standing by the side of their chief, General Lejeune, I once heard them sing:

From the Halls of Montezuma
To the shores of Tripoli,
We fight our country's battles
On the land as on the sea. . . .

As we raised our flag at Tripoli
And again at Mexico,
So we took Château-Thierry
And the forest of Belleau. . . .

Here's health to you and to our Corps,
Which we are proud to serve;
In many a strife we've fought for life
And never lost our nerve.
If the Army and the Navy
Ever look on heaven's scenes,
They will find the streets are guarded by
United States Marines.

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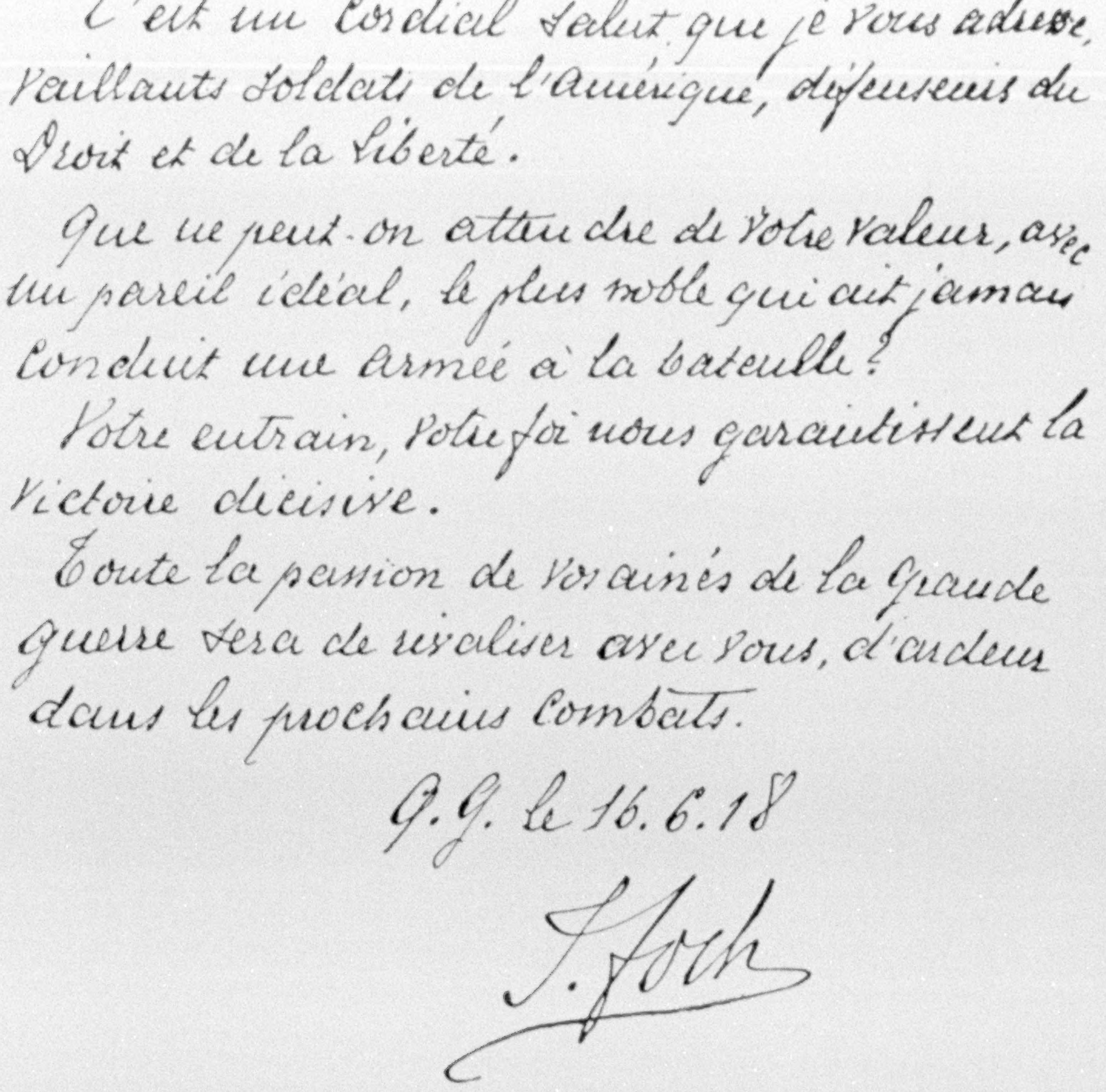
* See "The National Geographic Society's Memorial to American Troops," in the NATIONAL GEOGRAPHIC MAGAZINE for December, 1923.



C'est un cordial salut que je vous adresse, Vaillants Soldats de l'Amérique, défenseurs du Droit et de la Liberté.

Que ne peut-on attendre de votre valeur, avec un pareil idéal, le plus noble qui ait jamais conduit une armée à la bataille?

Votre entrain, votre foi nous garantissent la victoire décisive.

Toute la passion de vos aînés de la Grande guerre sera de rivaliser avec vous, d'ardeur dans les prochains combats.

Q.G. le 16.6.18

F. Foch

THE ALLIED COMMANDER'S MESSAGE TO THE A. E. F.

"The greeting that I send you is a cordial one, valiant soldiers of America, defenders of right and liberty. What cannot one expect of your valor with such an ideal, the noblest that ever led an army into battle? Your spirit, your devotion, guarantees for us a decisive victory. All the passion of your seniors in the great war will be to strive to emulate your ardor in the approaching combats."

Then came, in July, for the "Rainbow Division," the battle in Champagne, under General Gouraud; then, in September, the capture by an army of about 660,000 men (550,000 Americans and 110,000 French), under the command and leadership of General Pershing, of Saint-Mihiel, in the hands of the enemy since the beginning of the war; where Generals Pershing and Pétain entered, side by side, on the 13th of that month.

The American Secretary of War, Mr. Newton D. Baker, was also present and noticed a ruined house, duly pillaged and emptied of all furniture, with a solitary engraving still hanging on one of its crumbling walls. The gentleman happening to nod to him from his frame in this devastated place was "Le Général Lafayette."

Lastly, the great Meuse-Argonne offensive, which was, on the 5th of November, to carry the American troops to the right bank of the Meuse and to end in the final victory.

Photograph from Press Illustrating Service

PARIS GREETED WOODROW WILSON AS THE MAN OF THE HOUR

No other emissary of the people of the United States ever met with such a stirring reception as that accorded the war-time President by cheering multitudes in the French capital.

Photograph by U. S. Army Signal Corps

THE YOUNGER GENERATION OF FRANCE REVIEWS ADVANCING YANKEE SOLDIERS

Many cemeteries, kept in perfect order, under careful American supervision—at Romagne-sous-Montfaucon, at Thiaucourt, Suresnes, and several other places—and a number of monuments, now to the American, now to the French Army, now to both — sometimes grandiose, sometimes naïvely modest, like the one shown in Mr. Courtellemont's Plate XIII—are also reminders of the past.

MARSHAL FOCH DEDICATES MEMORIAL

The fine one at Flirey, erected by the French to commemorate the "jump off" of the Americans in that great offensive of theirs which resulted in the capture of Saint-Mihiel, was dedicated in August, 1921, by Marshal Foch, in the presence of a delegation of the American Legion.

The village by the side of which it now stands consisted of such a confused heap of ruins that its parish priest, an old man, white-haired, ruddy-checked, with a worn *soutane* turning to green, told us the intention was to rebuild it, not on its old site, but a little beyond, what was left of its houses being rather a hindrance than a help.

As touching as any are a few scattered tombs, like that of Quentin Roosevelt at the place where he fell, or that of the first three Americans who died fighting in the great conflict. A monument, on which appears the double cross and the thistle of Lorraine, was raised to them near Bathelémont, during the war, by a subscription in which all the villages of the Department of Meurthe-et-Moselle took part. The inscription reads (I translate):

"Here, in Lorraine ground, rest the first three American soldiers killed at the front, November 3, 1917: Corporal J. M. Gresham of Evansville, Private Thomas Enright of Pittsburgh, Private Merle D. Hay of Glidden. Worthy sons of their great and noble nation, they fought for right, for liberty, for civilization, against German imperialism, the bane of mankind. They fell on the field of honor."

A reduction in ceramics of this tomb was made at Nancy, and it was my privilege to present one to each of the three mothers.

As for us, the number of our dead has been so considerable that it has proved impossible to secure for each a separate resting place, and they lie, unknown soldiers, by the tens of thousands or hundreds of thousands, in ossuaries, as at Douaumont, Dormans, Notre-Dame-de-Lorette, Hartmannsweilerkopf, la Ferme Navarin; and ceaseless new finds make it necessary to remodel and increase the size of those repositories.

Just now a movement has been started, under the leadership of Marshal Lyautey, for private contributions to help toward those indispensable increases. In a common grave lies, with over a hundred of his companions, the only son of Marshal Foch, killed in the first month of the war.

Asked later whether he desired that the body be removed for separate burial, the Marshal refused, saying that he had rather his son should remain with his comrades; and he never failed, each year, on the anniversary of the young lieutenant's death, to make a pilgrimage to the spot and, thinking of them all, to kneel in prayer.

Scarcely less moving is the sight of those empty spaces where Nature has not neglected to play her part and to grow wild flowers, where prosperous villages once stood and where nothing remains, indeed, but wild flowers.

Some twenty of these villages have fared even worse than Flirey and are counted among the war dead; their inhabitants, killed or scattered, have vanished; there are none left to bring back life to those desolate places. Their names had to be struck from the list of French communes.

HOLDING THEIR TRENCH TILL THE END OF TIME

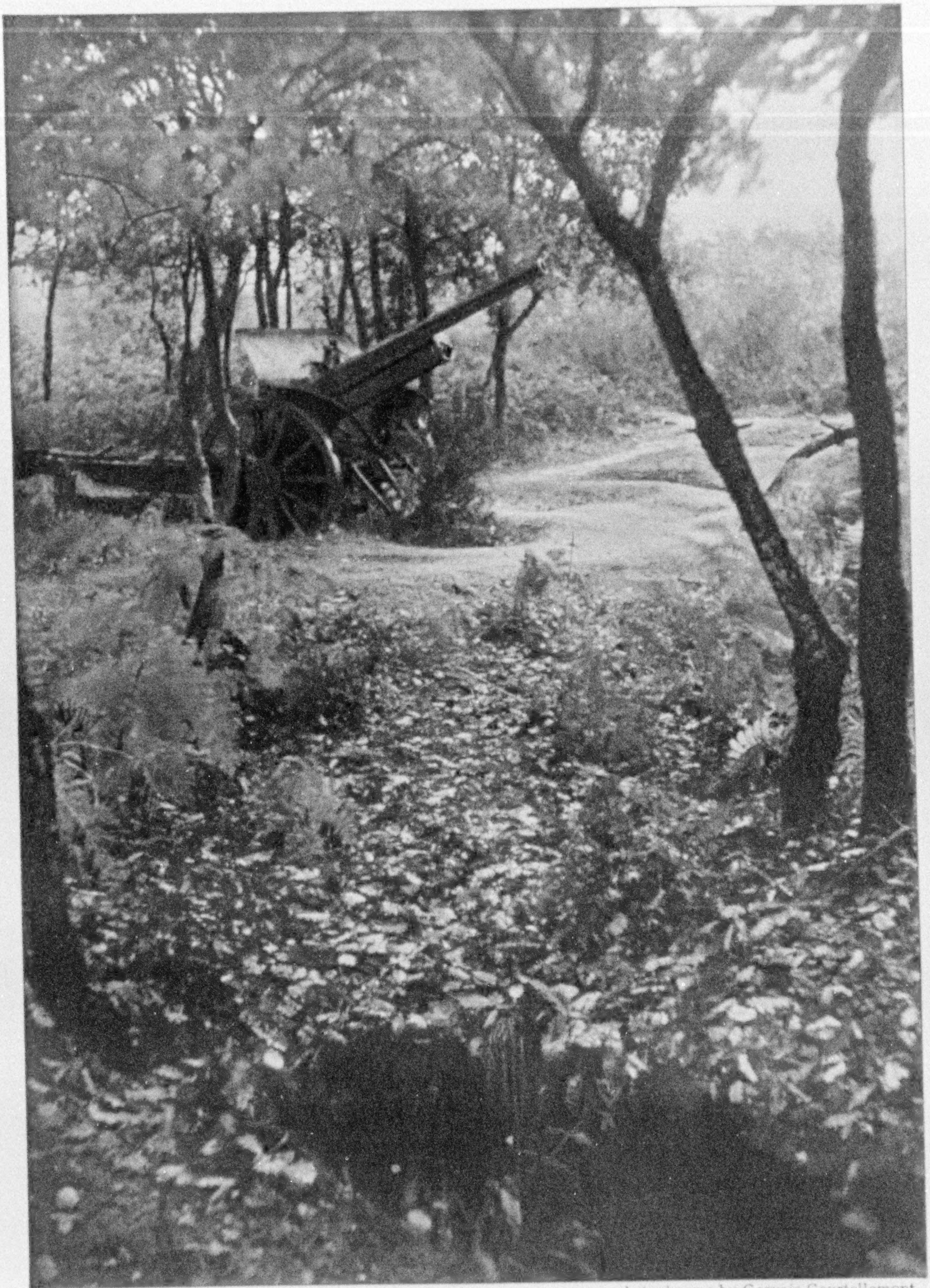
Shortly after the Armistice, as we were returning from the fort of Vaux, to which we had been guided by General Valentin, then in command at Verdun, we stopped at some distance, on a denuded plateau, nothing rising above the level ground—not a tree or the stump of a tree, not a shed, not a stone—nothing.

"Here," said the General, "you are in the midst of the village of Fleury."

"This is indeed," my wife answered, "sacred ground."

The General replied, "I shall show you, Madame, truly sacred ground."

Leading the way among the shell holes, full of marshy water, many overlapping



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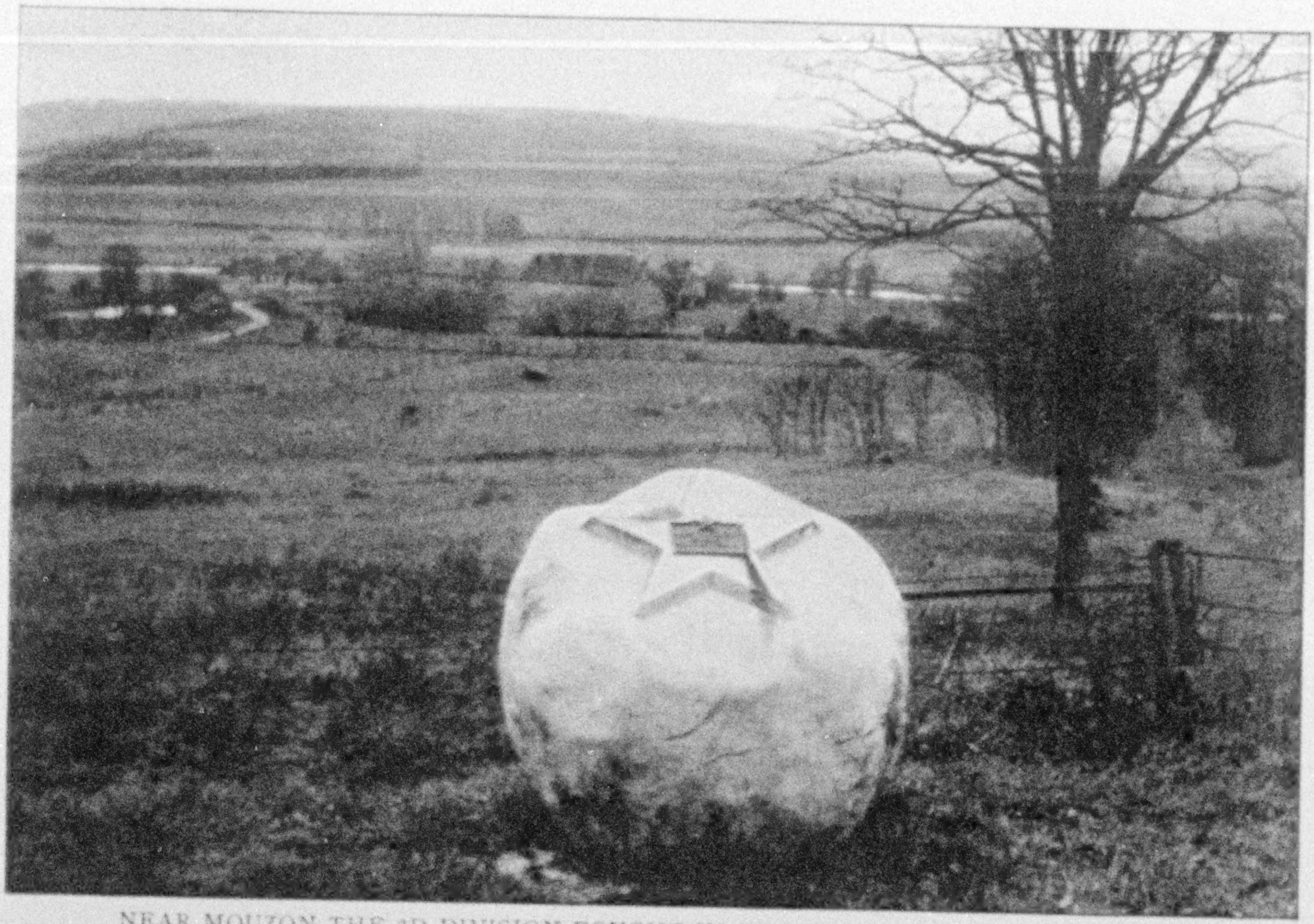
Autochrome by Gervais Courtellemont

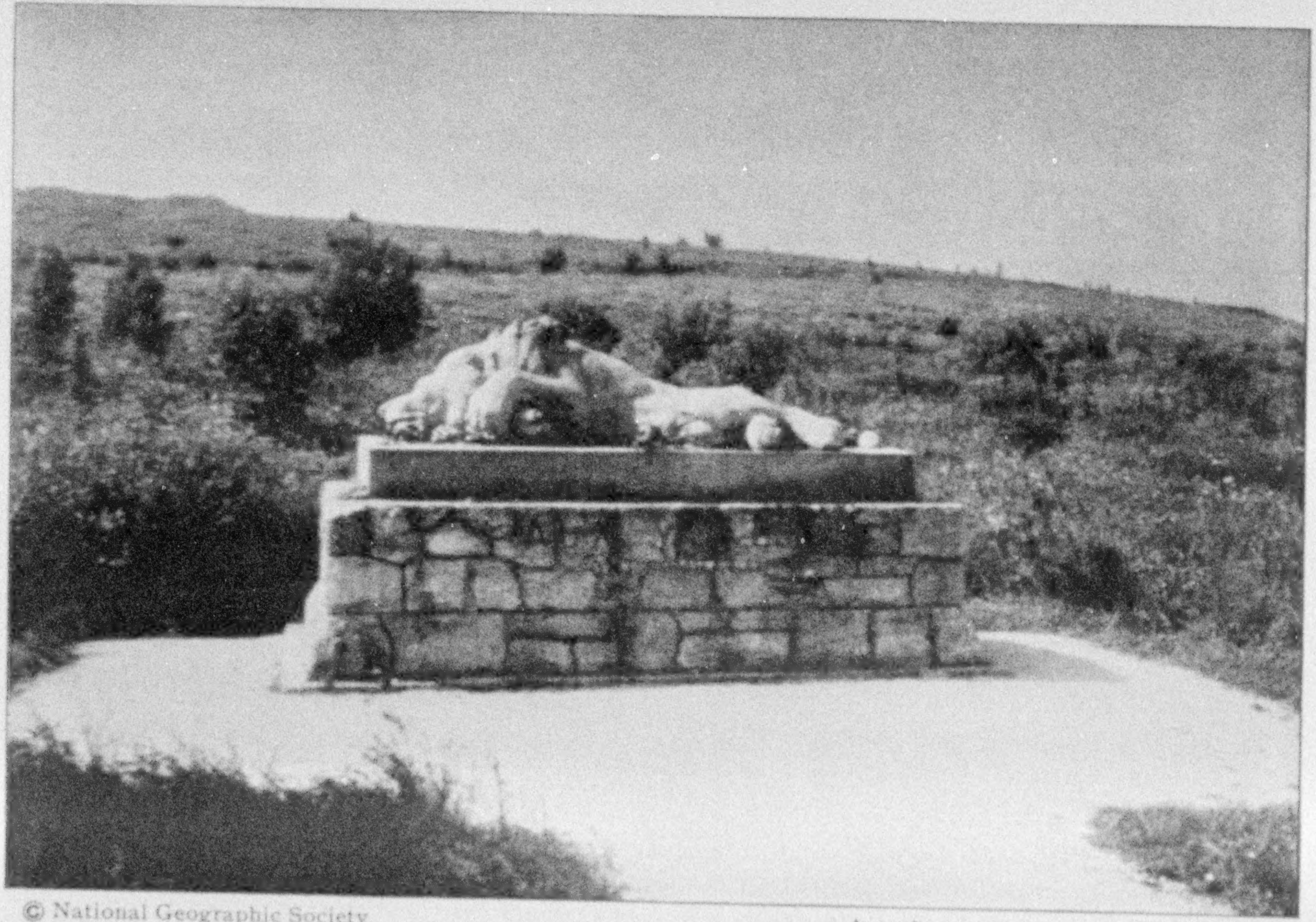
ONE OF THE PIVOTAL QUESTIONS OF THE WAR WAS DECIDED AT BELLEAU WOOD

While no large strategic importance attached to this position, it was here that German and American troops first came to real grips, and it was here that the Americans so magnificently proved their mettle. The field gun still stands in the northern part of the woods just where it was when captured by a battalion of the 5th Marines on June 25, 1918.



NEAR MOUZON THE 2D DIVISION FOUGHT IN THE CLOSING DAYS OF THE WAR

Marching at night with a detachment of German-speaking Americans out in front to answer the challenges of enemy patrols, the Second advanced several miles into hostile territory and captured a number of prisoners, including a German headquarters staff, which they took entirely by surprise. The bowlder carved with the divisional star marks a point of their advance in the vicinity of Mouzon.



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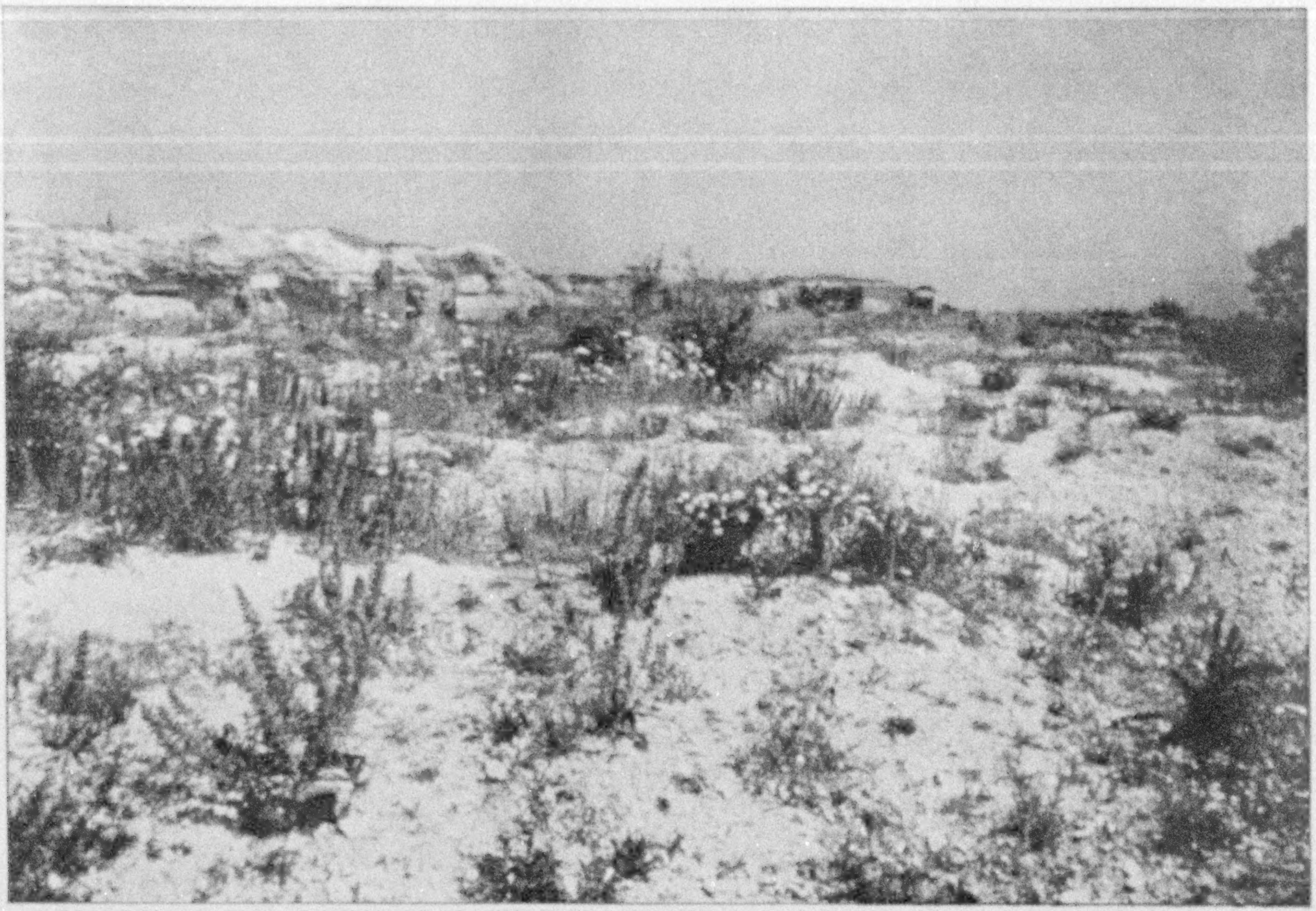
Autochromes by Gervais Courtellemont

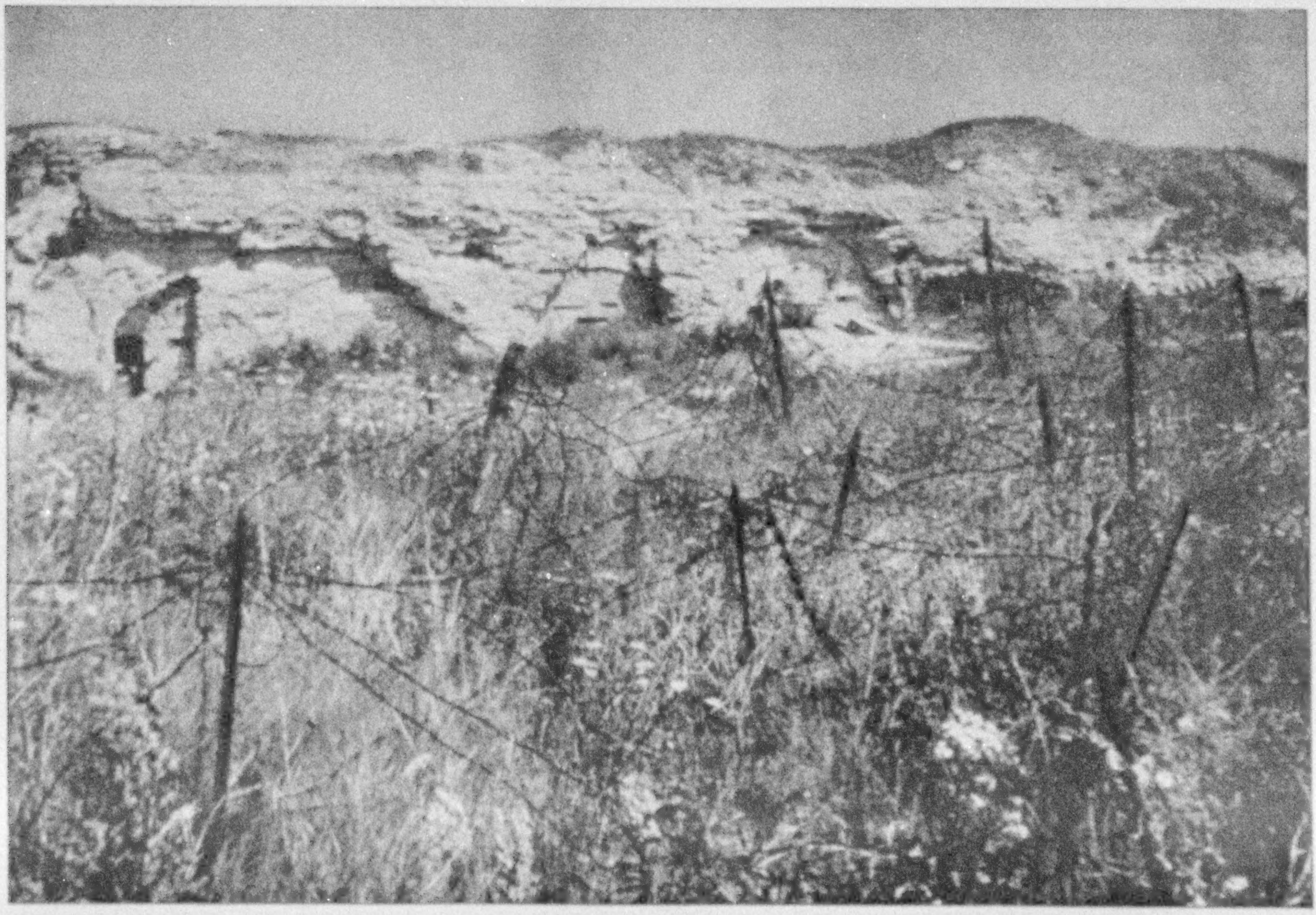
FLEURY WAS AS CLOSE AS THE GERMAN FORCES CAME TO VERDUN

In the spring and early summer of 1916 the flower of the German Army under the personal direction of the Crown Prince launched an attack against Verdun which for sheer weight and ferocity had perhaps never been equaled in the annals of war. On June 23 the gray-clad hosts reached the point marked by this monument at Fleury, near Douaumont, just three miles from the city, before the tide of battle turned and they were driven back.



SOME VAST CATACLYSM OF NATURE MIGHT WELL HAVE CREATED THIS DEVASTATION

A combination of earthquake and volcano could hardly have succeeded in ruining the country about Vaux, one of the Verdun forts, more effectually than did the millions of shells and mines loosed upon it during the World War. Whoever it was who first exclaimed, "Ils ne passeront pas!" (They shall not pass), the French troops made the words theirs and the enemy did *not* pass. A summer growth of flowers now partially hides the devastated soil.



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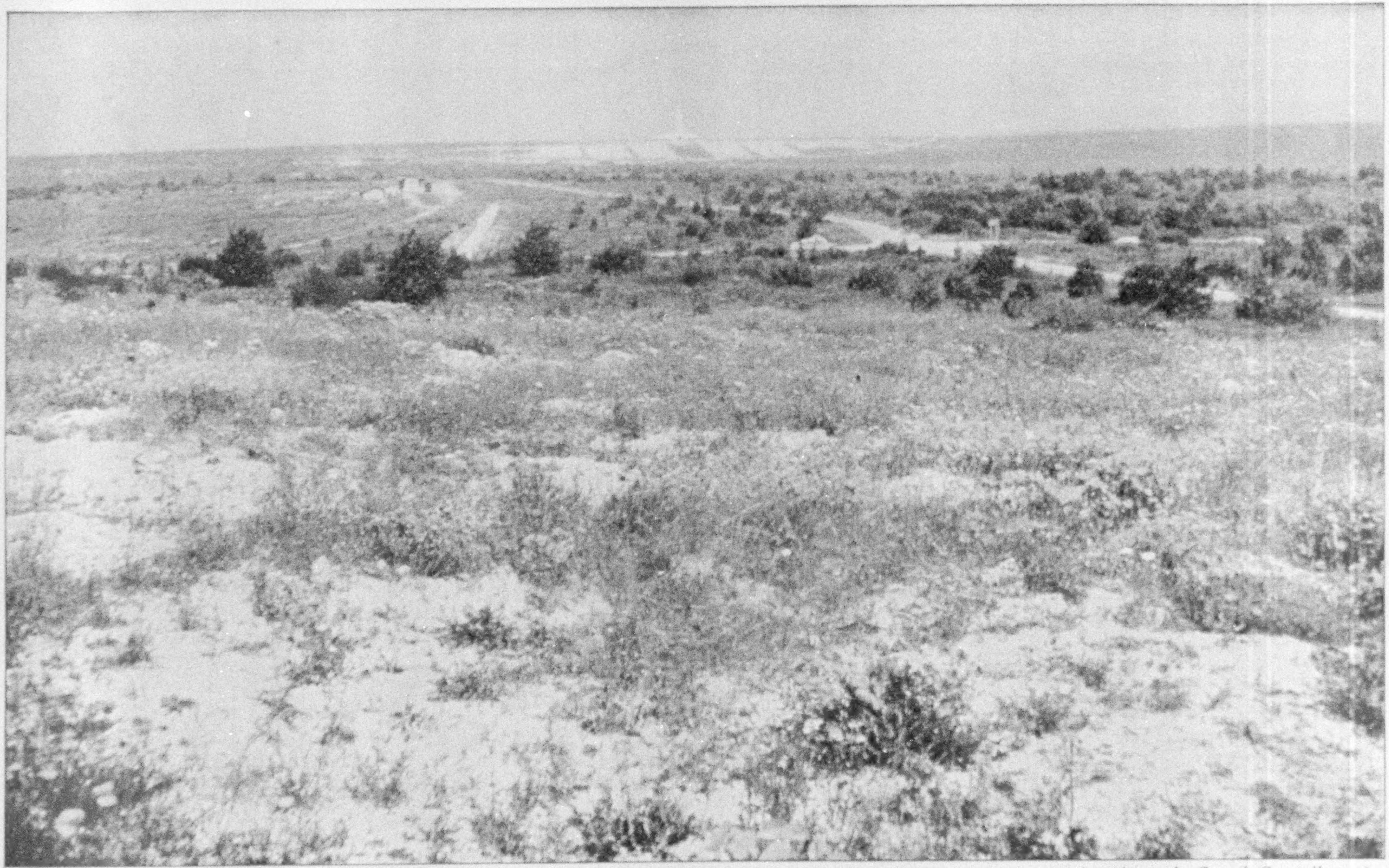
IN A SINGLE NIGHT 200,000 GAS SHELLS FELL ABOUT FORT DOUAUMONT

The walls of this stronghold were so massive that four years of battering failed to demolish them completely. It changed hands several times in the course of the war and cost many casualties on both sides. In four months of offensive operations in the Verdun sector in 1916 Germany sacrificed 400,000 men, while the gallant French defenders on one occasion lost more than 55,000 in a day. The barbed wires remain much as they were eleven years ago.



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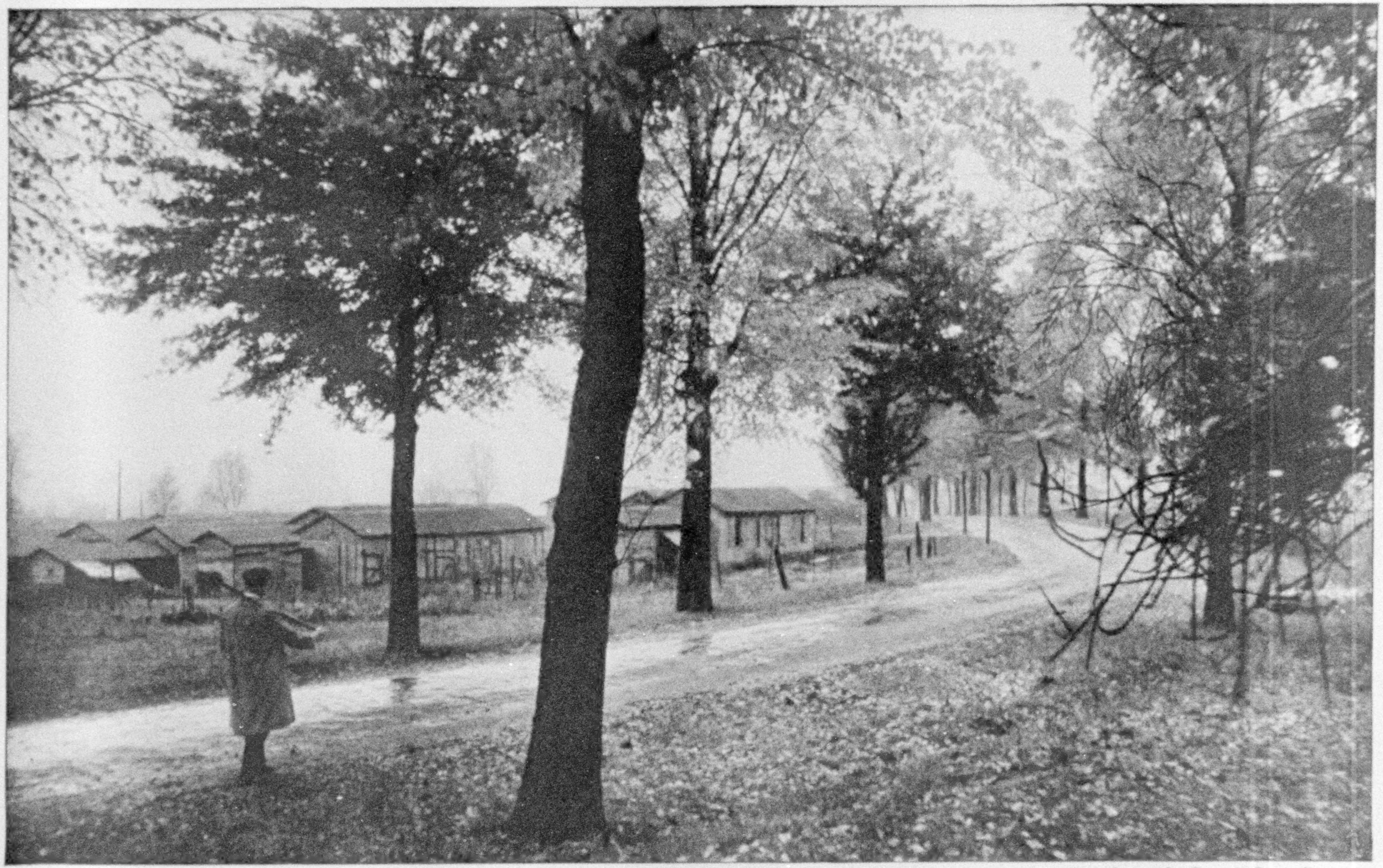
THE FIELD OF VERDUN EVER WILL REMAIN A MONUMENT TO THE VALOR OF FRANCE

For nearly a year this extensive area on the right bank of the Meuse was the scene of titanic conflict. The Germans attacked again and again with reckless disregard for human losses and the French put every ounce of a strength born of desperation into repulsing them. In the distance is the Douaumont monument, surrounded by a vast cemetery where lie thousands of those unknown heroes who "barred the way to Verdun." Near by is the so-called "Trench of Bayonets" where a French detachment was buried by a bursting shell and never disinterred. Their bayonets still protrude above the ground, grim reminders of their tragic fate.



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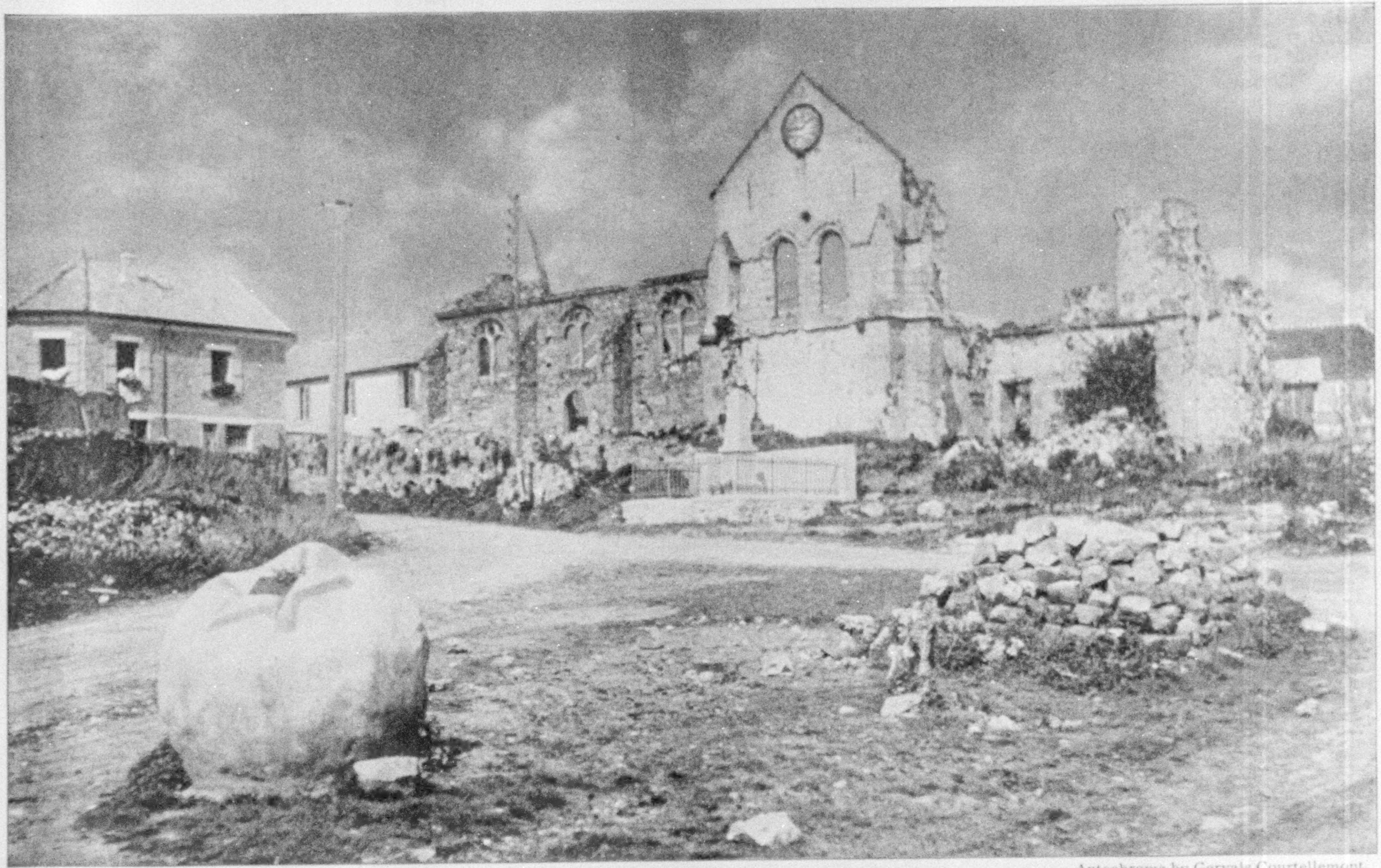
WHEN THE HOUR OF THE ARMISTICE STRUCK MEN OF BOTH THE 1ST AND 42D DIVISIONS WERE AT THE GATES OF SEDAN

Although in the closing days of the war American troops were approaching the city from two sides, there were excellent reasons why the French were given the honor of being first to enter. For it was at Sedan in 1870 that Napoleon III's army surrendered to the Germans, and brought to a virtual conclusion the brief but disastrous Franco-Prussian War. The barracks along this road from Stenay to Sedan were used by the American troops after the Armistice and now house workmen.



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AN INFERNO OF BURSTING SHELLS LAID WASTE TO LUCY-LE-BOCAGE

This village is just south of Belleau Wood (see Color Plate I) and many of the wounded in that battle were treated here before being taken to hospitals in the rear. At a culvert just outside of the village a detachment of American naval medical officers of the 4th Brigade of Marines maintained an advanced dressing station. Note the 2d Division's star and bowlder monument (see also Color Plate II). The church and many of the houses have not yet been rebuilt.

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HERE IN THE SUMMER OF 1918 THE DESTINY OF CIVILIZATION WAS DECIDED

At Château-Thierry Germany's final advance on Paris was turned back in some of the fiercest fighting of the World War. A little to the west of the town lies the hamlet of Vaux and Hill 204. This eminence was an enemy stronghold which Franco-American troops captured after overcoming a desperate resistance. Only the extreme newness of everything serves to remind one now of the ghastly June days eleven years ago, when everything—woods, gardens, and houses—had been destroyed.

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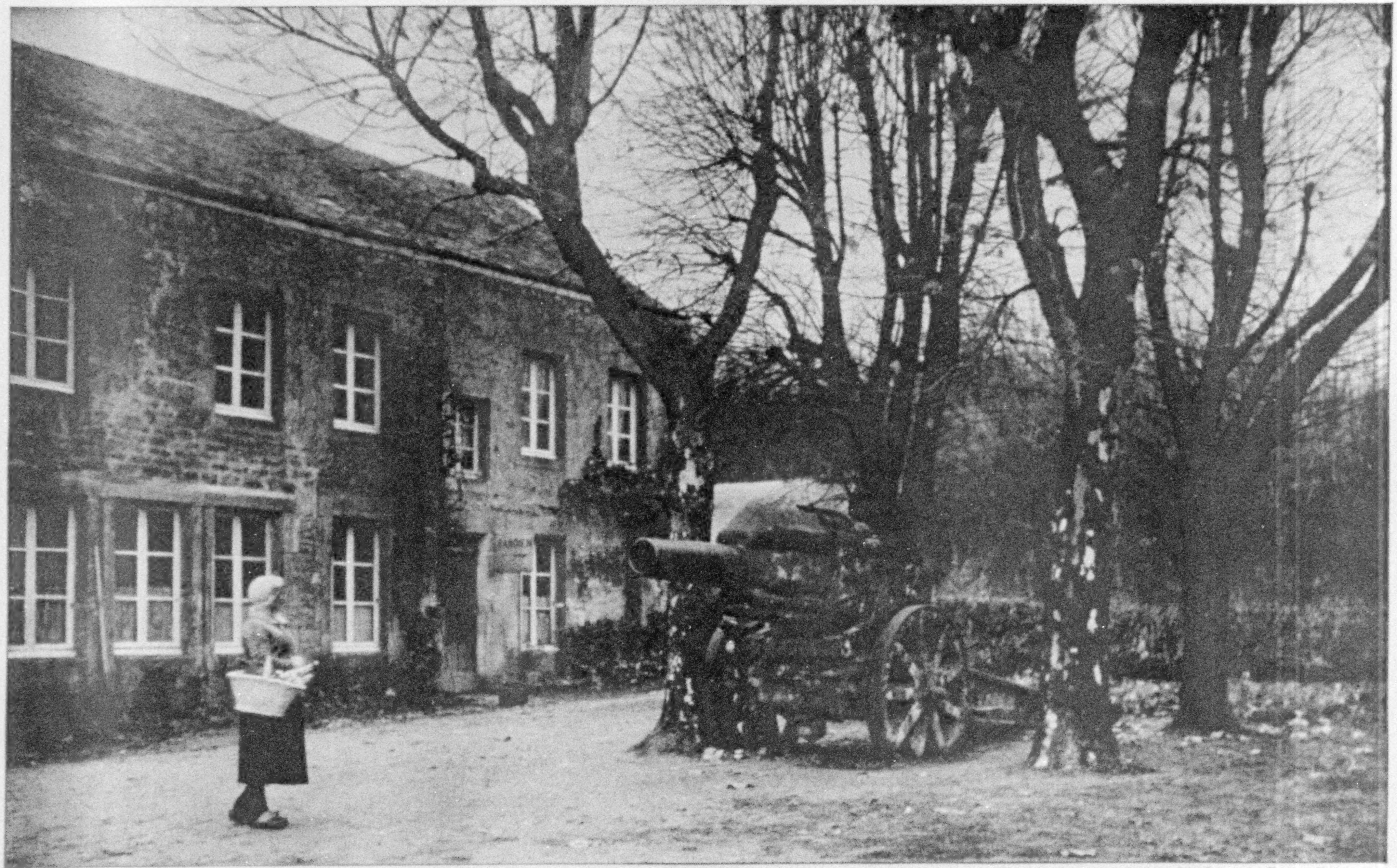
MONTFAUCON: NOT MANY MILES FROM HERE THE HEROIC "LOST BATTALION" MADE ITS PLACE IN HISTORY

In the great Meuse-Argonne engagement of 1918 six companies of the 308th Infantry, one of the 307th, and parts of two companies of the 306th Machine Gun Battalion were entirely surrounded by the enemy, and cut off from the rest of their division. For five days and four nights they held their position against repeated assaults and bombardments. Food and water became scarce and their suffering was acute, but they spurned surrender. Finally on October 7 they were rescued, but of the 463 men who were cut off, 225 were killed and wounded. Montfaucon proved a hard position for the 79th Division, aided by the 37th and the 4th, to capture, being strongly defended by the army of the German Crown Prince. Its fields have been leveled and restored and fine grain grows now where there was utter desolation eleven years ago.



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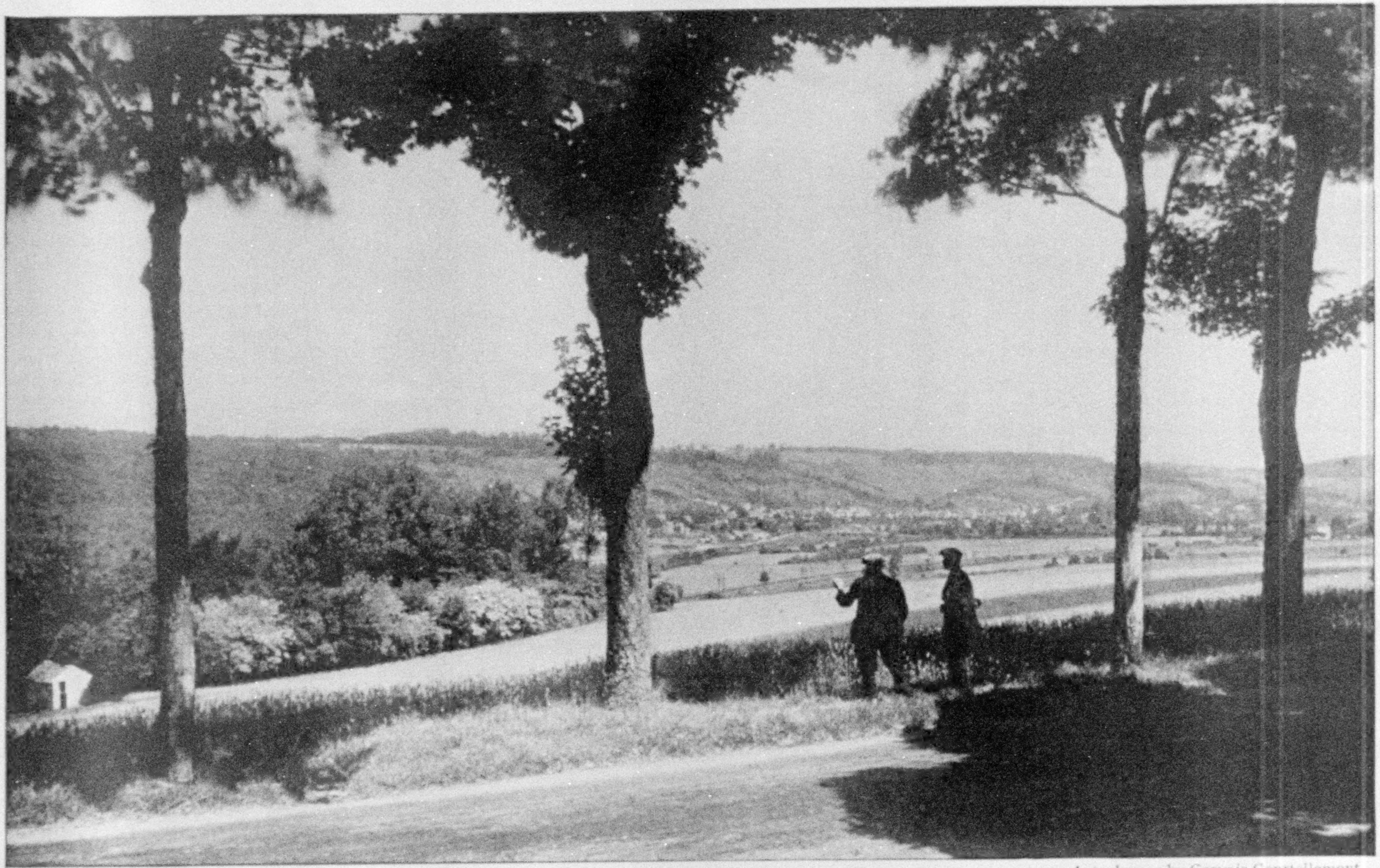
THE COUNTRY ABOUT SEDAN IS RICH IN MEMORIES OF 1870

To the relics of the Franco-Prussian War which are gathered at Bazeilles has been added this piece of heavy artillery which was taken by the advancing Allies from a stone quarry where it stood in battery protecting the German retreat. The museum at the threshold of which it has been placed is the celebrated "Last Cartridge House" of Alphonse de Neuville's well-known picture reproducing an episode of the War of 1870—that of the heroic defense made by a handful of French soldiers in this besieged building.



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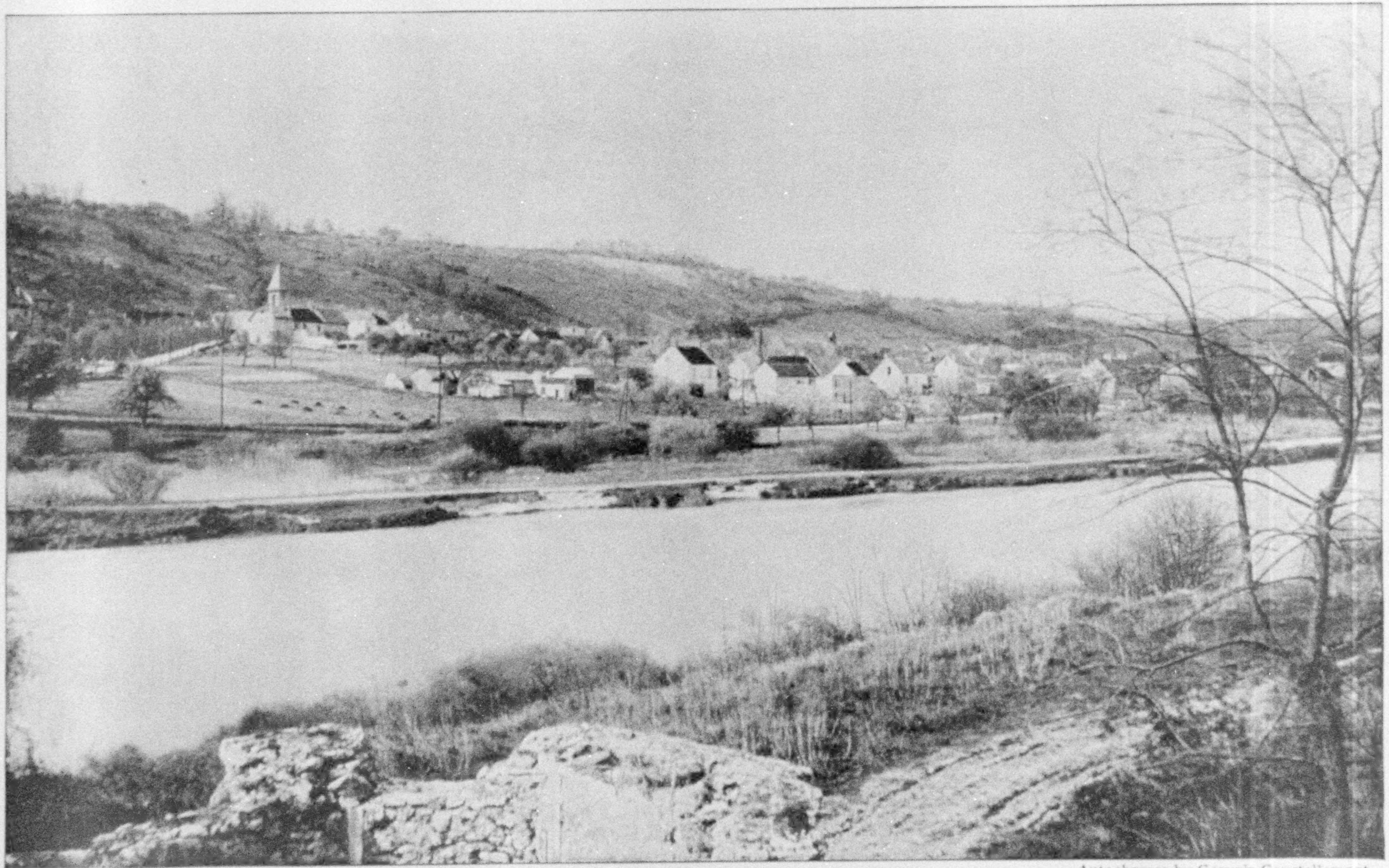
THE MARNE VALLEY AT JAULGONNE

A general panorama of an American battle field. After having crossed the Marne on a bridge of boats, the Americans stormed the wooded hills to occupy the German position at the top.



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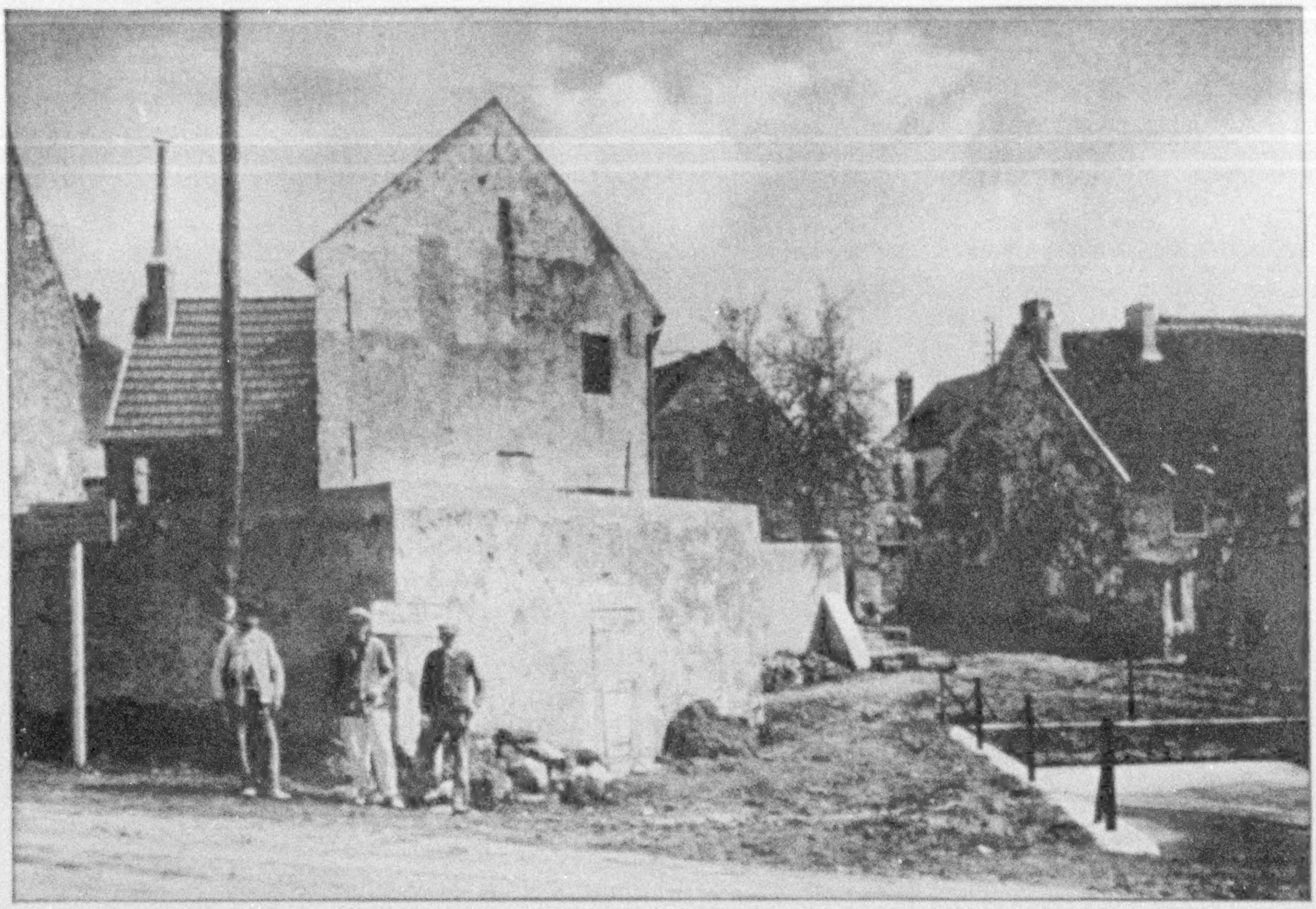
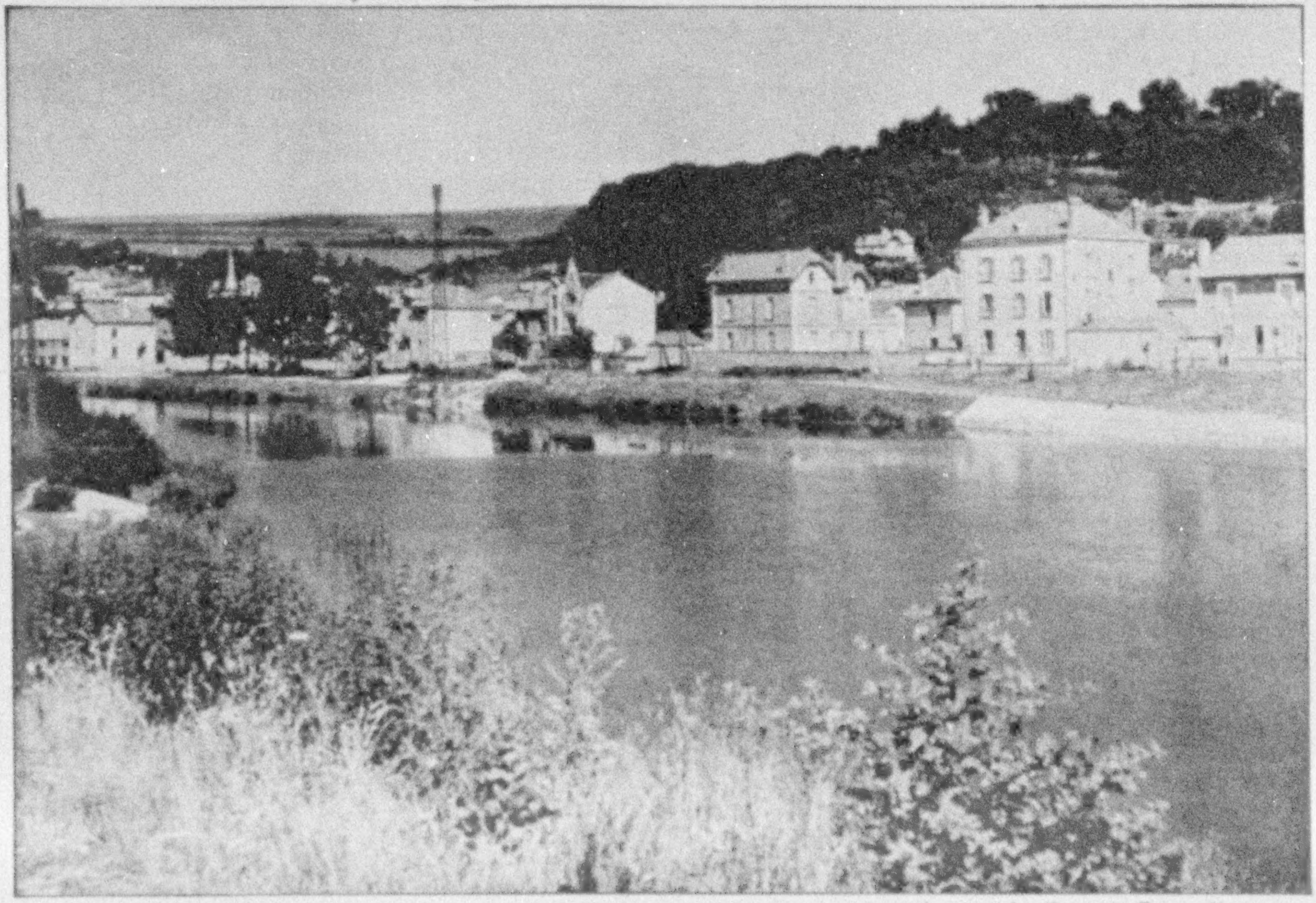
SINCE THE DAYS OF ATTILA AND HIS DEVASTATING HORDE, THE VALLEY OF THE MARNE HAS BEEN NO STRANGER TO THE WAYS OF WAR: JAULGONNE VILLAGE, NEAR CHÂTEAU-THIERRY

In the background is the wooded hill which American troops captured by storm to take possession of the woods west of Jaulgonne in July, 1918. The village has been, in large part, reconstructed since the Armistice.



NEW VILLAGES RISE PHOENIXLIKE FROM RUINS OF THE OLD

Artillery bombardments such as the world had never dreamed of left much of France a waste. So well, however, did her people apply themselves to the tasks of reconstruction that new communities have sprung up on every hand from the débris of those destroyed in the World War. The rebuilt section of Lucy-le-Bocage.



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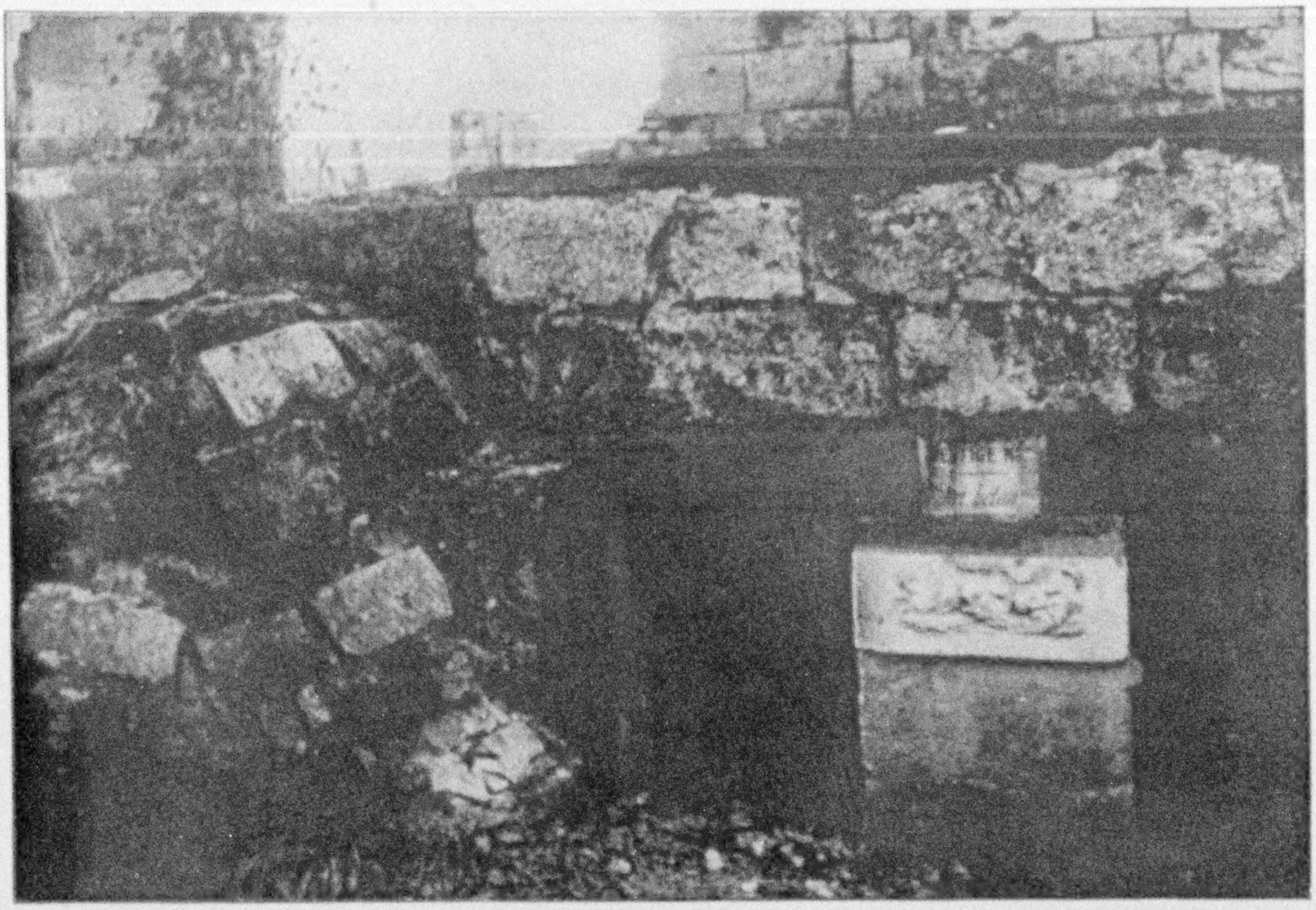
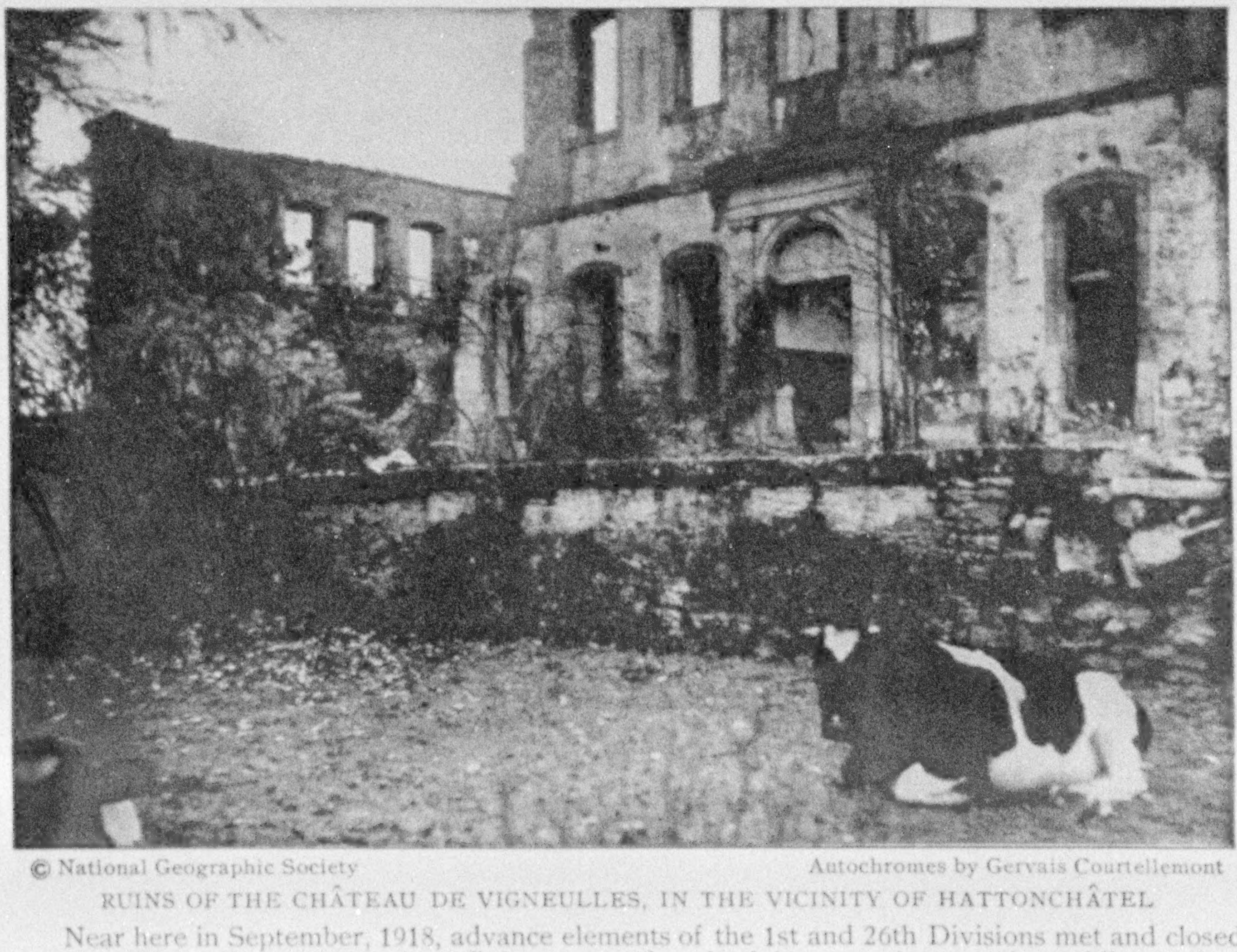
ST. MIHIEL STILL FEELS HER WOUNDS

The town's prosperity before the World War was due in large measure to its activities as a frontier military post. With the international boundary changed and the garrison quartered elsewhere, business is dull in St. Mihiel.



POILU AND DOUGHBOY CLASP HANDS IN STONE

The battle areas of France are besprinkled with monuments and memorials. This one in Montfaucon was carved by soldiers of the victorious Franco-American army at the entrance to a concrete shelter built by the Germans among the ruins of a church. An American soldier's hand shakes a French soldier's hand.



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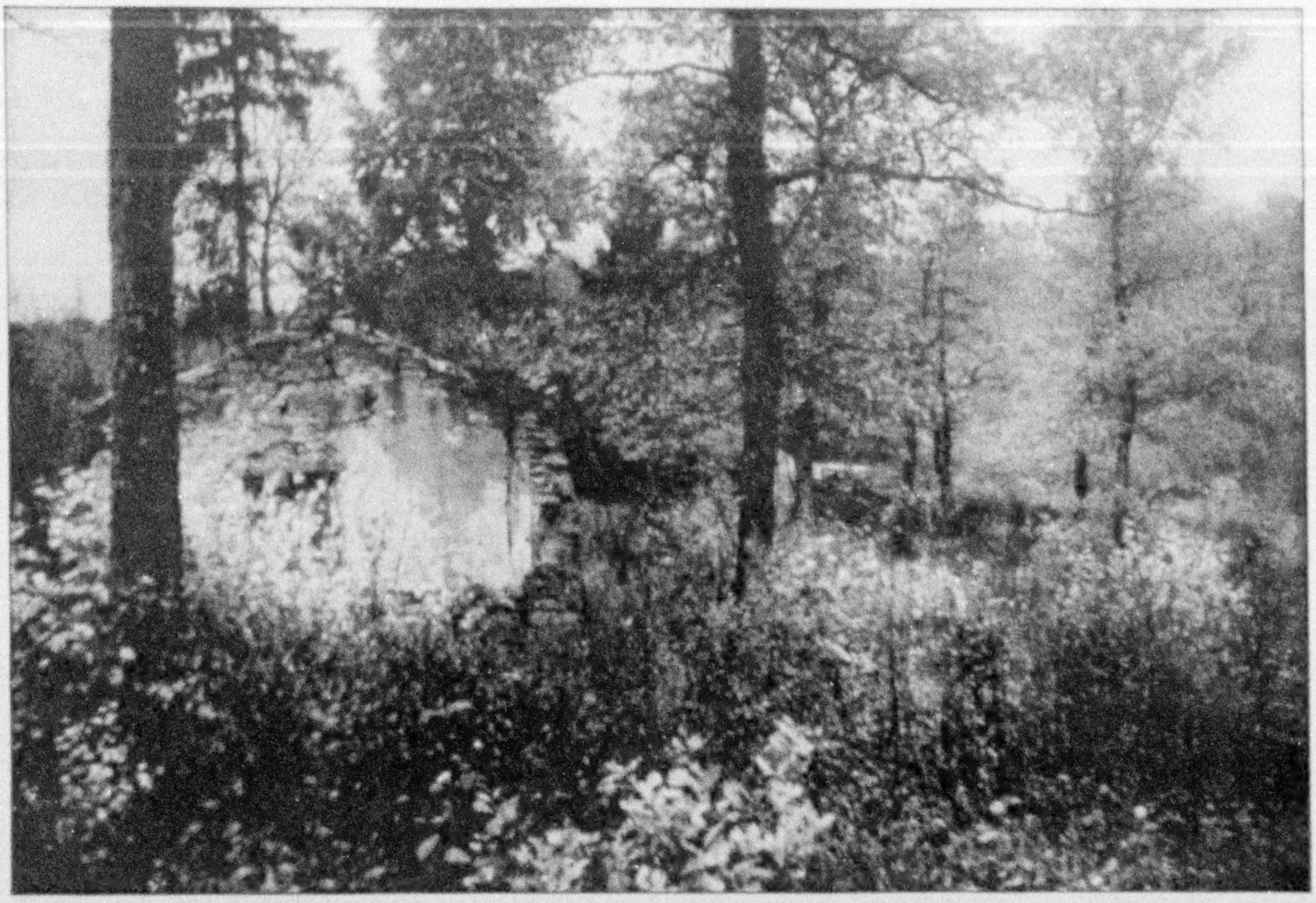
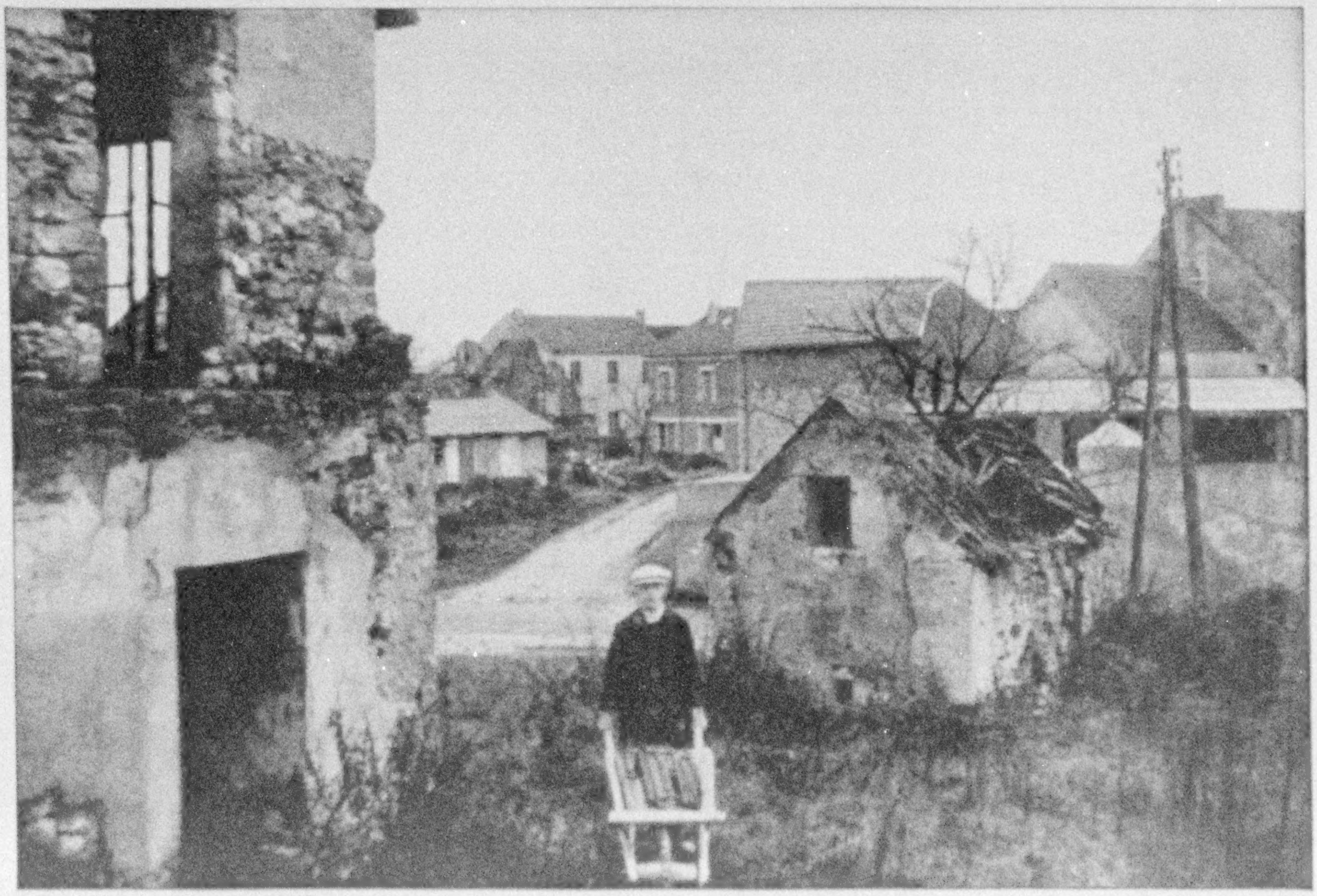
RUINS OF THE CHÂTEAU DE VIGNEULLES, IN THE VICINITY OF HATTONCHÂTEL

Near here in September, 1918, advance elements of the 1st and 26th Divisions met and closed the St. Mihiel salient, thus cutting off the escape of such of the enemy's retreating soldiers as had not yet succeeded in getting out.



SOLITUDE AND DESOLATION PERVADE BOIS DE MORT MARE ON THE ST. MIHIEL BATTLE FIELD

A crumbling house which sheltered American soldiers in 1918.



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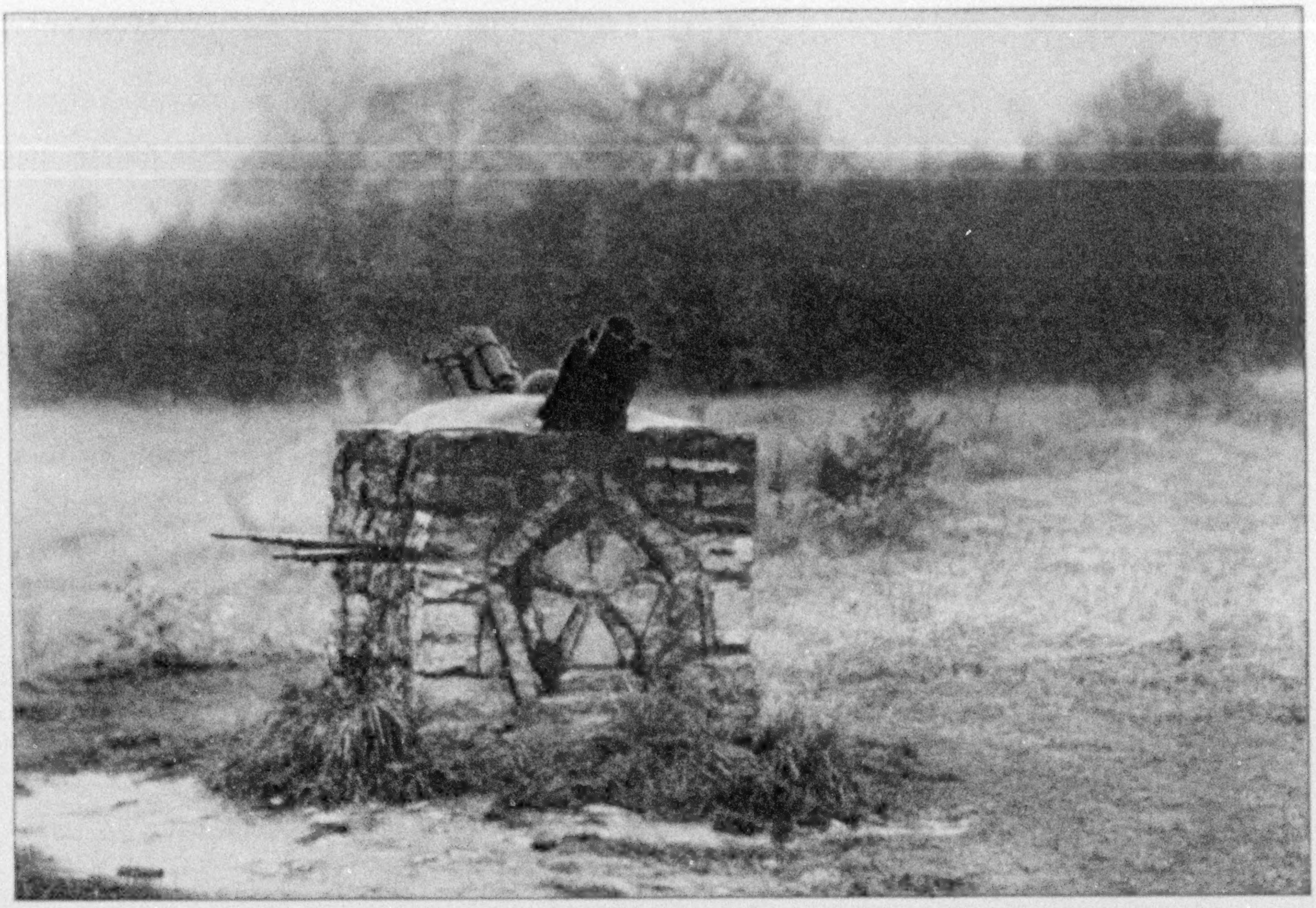
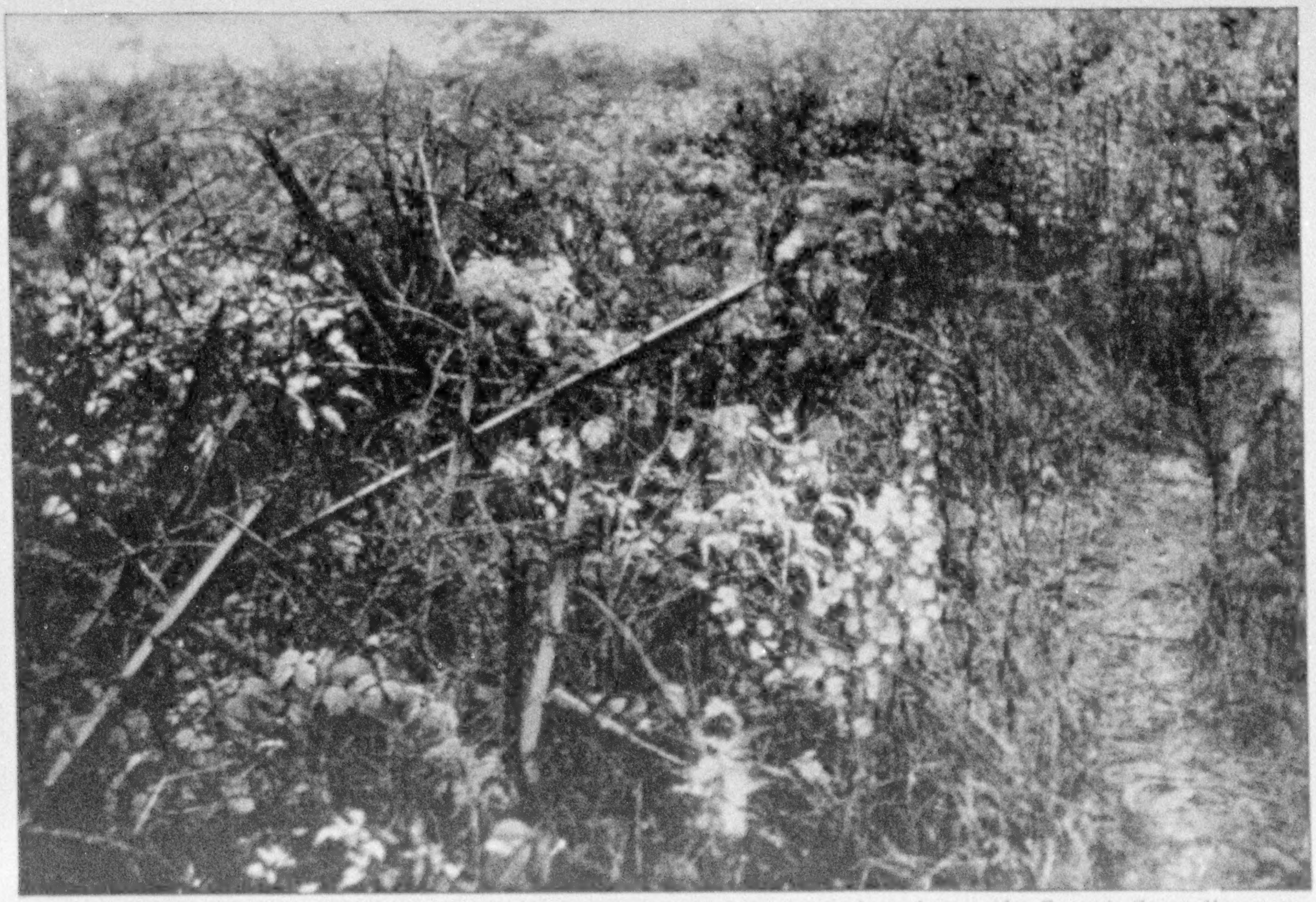
ELEVEN YEARS HAVE NOT SUFFICED TO EFFACE ALL EVIDENCE OF CONFLICT

Rebuilding has been slow in some parts of the devastated area. At Lucy-le-Bocage gaping holes in roofs, crumbling walls and piles of masonry and plaster are not uncommon sights.



TRENCH MORTARS AND RIFLES SET IN STONE RECALL AMERICAN EXPLOITS NEAR MOUZON

The inscription is "Fifth Corps—November 11, 1918."



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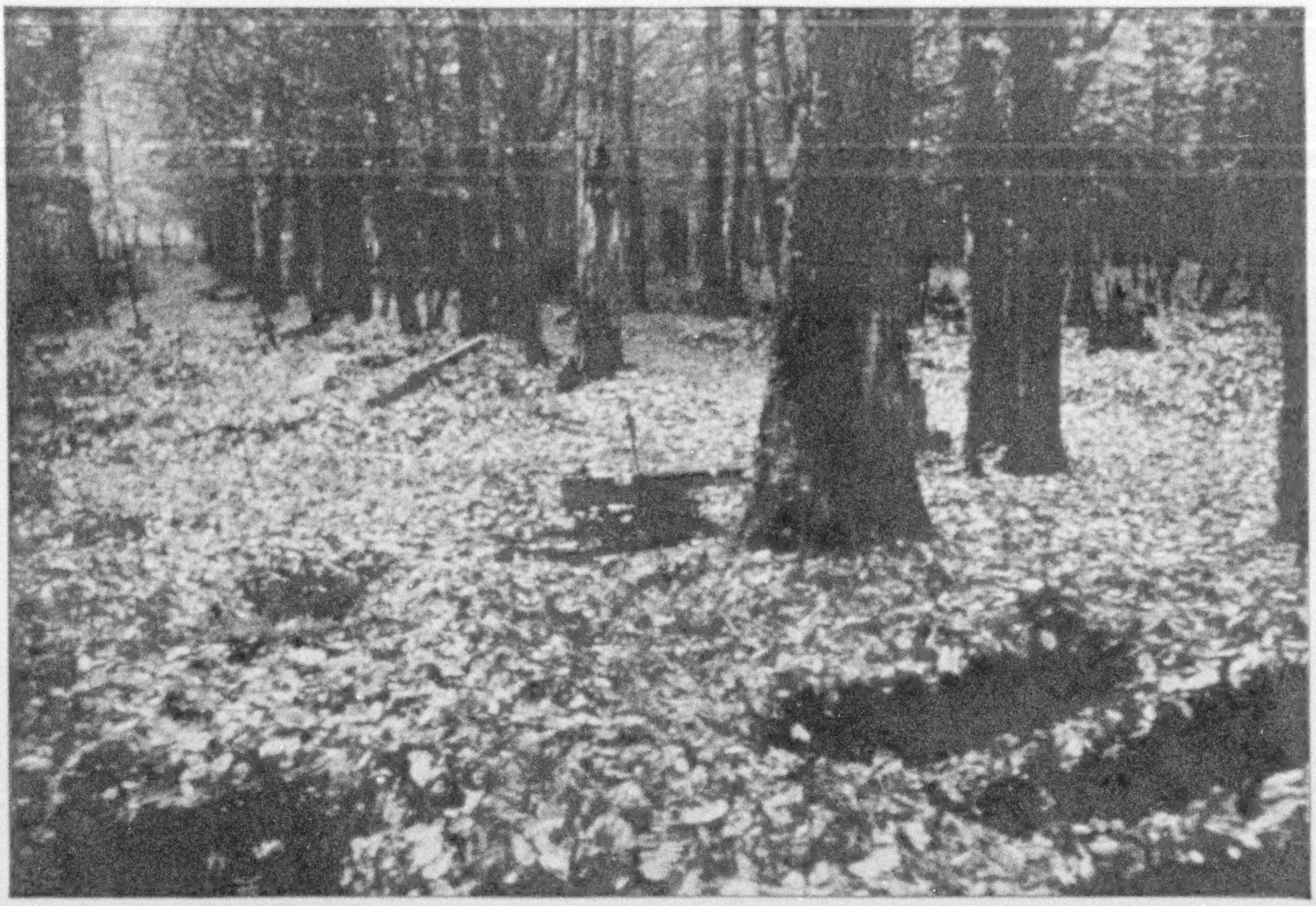
Autochromes by Gervais Courtellemont

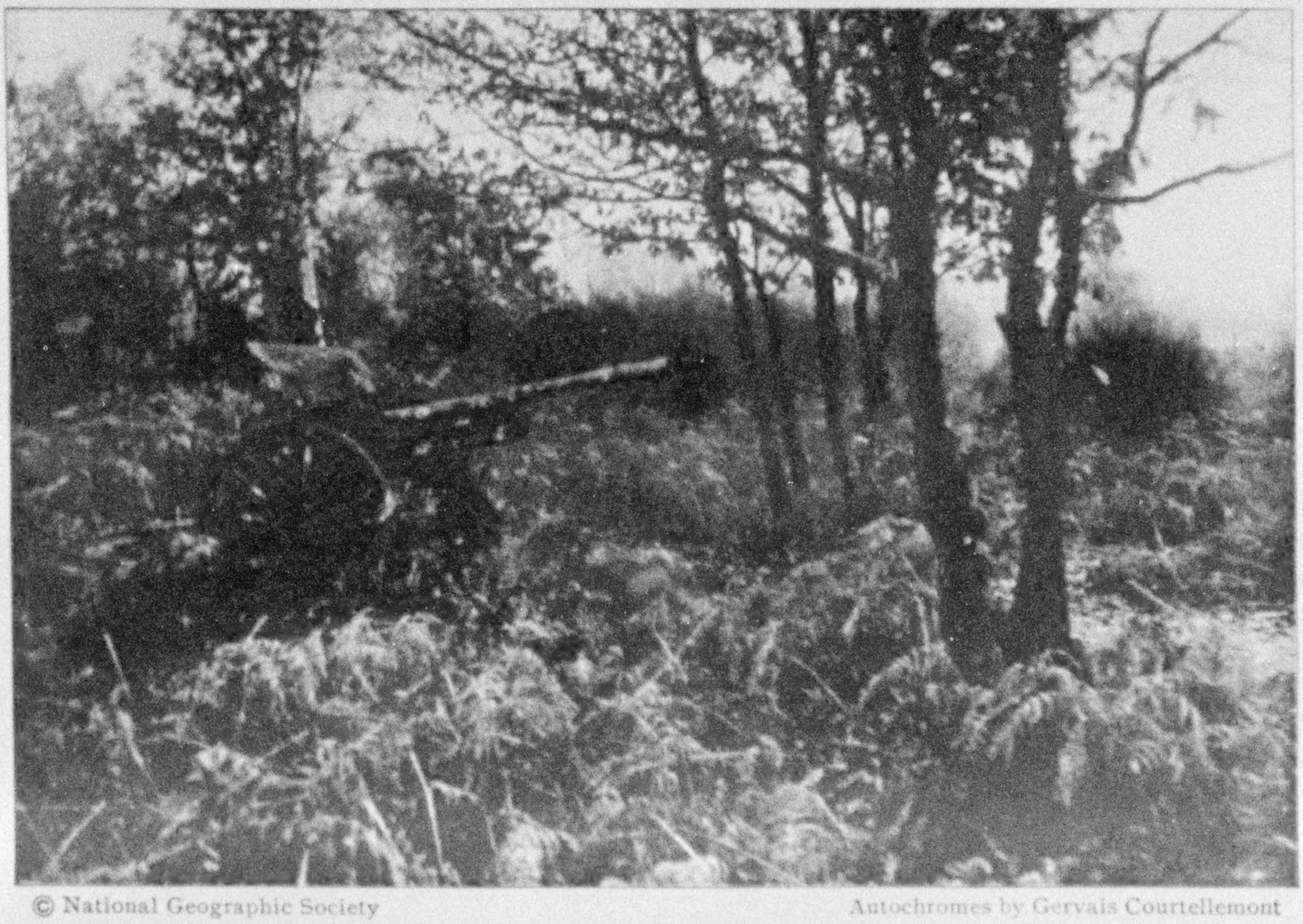
THE BARBED WIRE ENTANGLEMENT AND DEEP TRENCHES IN LE PRÊTRE WOODS

Along the south front of the St. Mihiel salient the Germans constructed an elaborate system of these defenses. Some of them presented formidable obstacles to the advancing Americans.



THEIR RATTLING HAIL OF DEATH FOREVER STILLED

German machine guns performed with deadly effect against American troops in Belleau Wood. The guns were captured during the fierce battles for possession of the wood in 1918 and remain as they stood eleven years ago.



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A SYMBOL OF THE WAR GOD'S FOUR-YEAR REIGN OF TERROR

The gun is an Austrian 88 millimeter and stands in Belleau Wood. Its high-velocity shells, which traveled faster than sound and burst suddenly without the usual warning scream, were known to the soldiers as "whizz-bangs." It has been allowed to remain on the very spot where it stood in battery in the copse, under the bracken. This part of Belleau Wood has been constituted a permanent memorial.

each other, he stopped at a place where the upper part of a rifle barrel appeared above the ground. A little farther another was to be seen; then another and another, in an irregular line. We were in front of the now famous Trench of the Bayonets (see Plate IV and page 548).

Some men of the 137th Infantry, the General explained, had been ordered to hold it at any cost. They were standing in it, rifles in hand, when a discharge of the enemy artillery fell on the very spot, upset the earthworks, and buried the occupants alive. There they stand, holding till the end of time the trench entrusted to them. A monument, due to American generosity, the gift of Mr. George B. Rand, now protects it.

Memorials of this sort, raised to the French by the Americans and to the Americans by the French, abound along the former front.

TRIBUTES OF FRIENDSHIP FROM GREAT WAR LEADERS

It has been observed in the course of history that allies, when the fight is over, are apt to bestow parsimonious praise on their associates, as if the greater such praise the less their own glory. Nothing of the sort was seen between us in the Great War. The Marne and Verdun were nowhere more admired than in the States, and the French sentiment for the Americans never wavered.

Most of their fighting divisions were mentioned in the orders of the French Army for all our troops to know of their valor. More than one division had several times that honor, bestowed in words carefully chosen, accurately recalling the occasion therefor; the same for the ambulance sections. Those orders are indeed worth keeping in each regiment's archives, for they are founded on facts; they were written on the moment; they are history, not empty words.

The great war leaders, in their public addresses and in their private conversations, as I can testify—Marshal Foch, Marshal Pétain, General Gouraud, and others—expressed just the same opinion as that recorded in the orders.

Many in the United States still remember the speeches delivered there by Marshal Foch in the course of that triumphal journey which he undertook in order to thank those who had helped him to victory. That journey further increased his sentiment for them; their activity, their youthful buoyancy, their cheeriness, their optimism went to his heart. He returned delighted with his voyage, pleased to think, as we read in one of the best, among the innumerable books written about him after his death, Major Bugnet's, that he had "helped to keep up among the Americans those sentiments of fraternal generosity which caused them to fight so heroically by our side.

"The Marshal has," the Major continues, "the same affection for the Americans as they show him. He doubtless smiles at times at their exuberance, but he is full of friendly good will toward them, because they act, because they build, because they do things. Just as they, he does not like corrosive, negative, destructive irony.

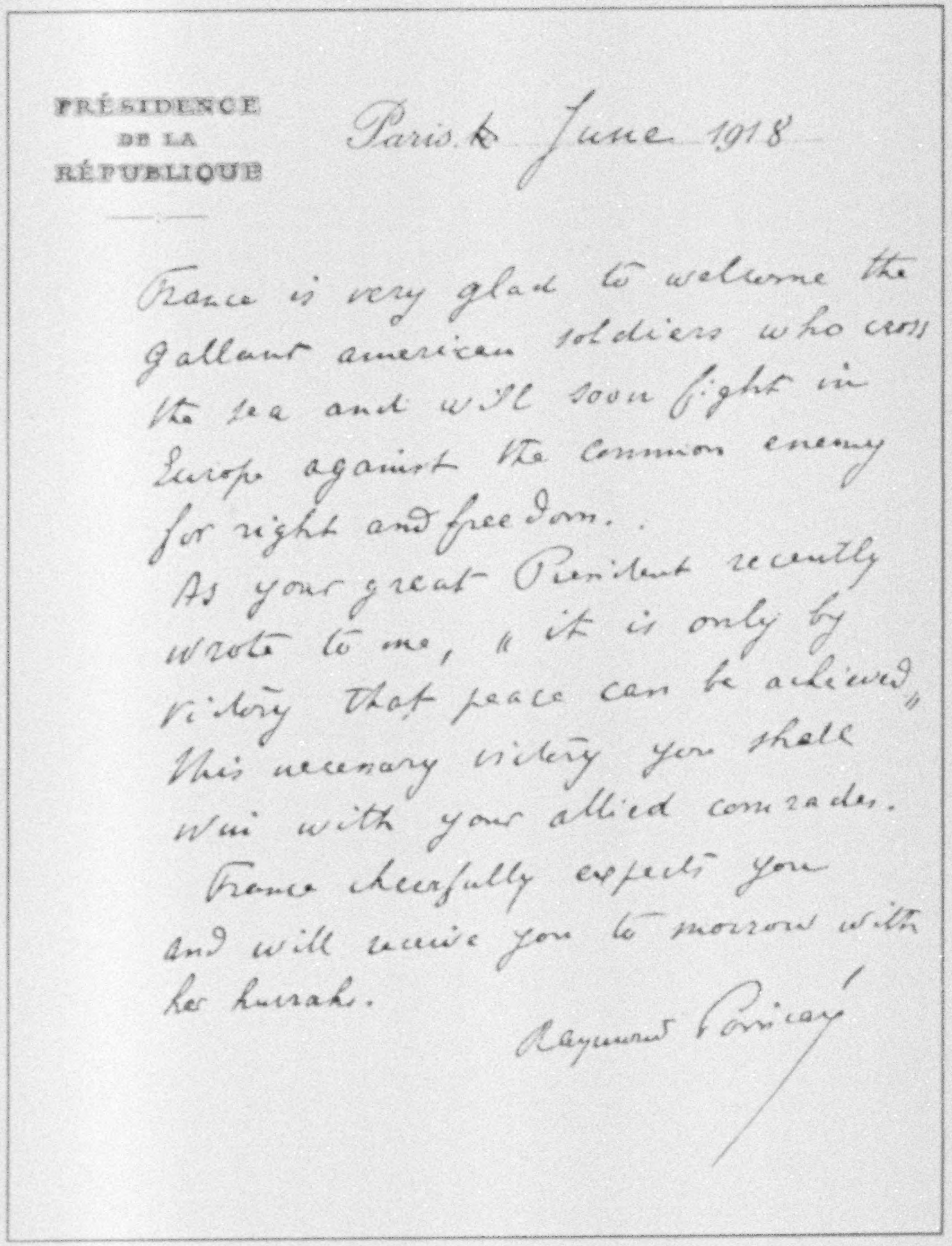
"He does not conceal his warm sympathy for their spirit of enterprise, nor a certain admiration for their methods, which tend to develop rather the character than the intellect. 'Consider America,' would he say, speaking of her youth, 'they are a vigorous lot, physically and morally. They go to school; and then, at twenty, they are launched out in life. If they don't know, they learn; they work, they extricate themselves. One can succeed only if one wills.'"

Speaking at the Suresnes Cemetery last May, General Gouraud said:

"Having had the honor to have under my orders three American divisions, and to attack in Champagne at the same time that General Pershing was attacking in the dense forest of Argonne and on the fire-swept glacis of Montfaucon, I can conscientiously render homage, once more, to the vigor, the courage and tenacity, of the American armies."

FRENCH HISTORIANS RECORD MUTUAL ESTEEM

In many French books and articles written after the war, the same sentiment is expressed; such books as that of Lieut. Colonel (now Major General) de Chambrun and Captain de Marenches, *L'Armée Américaine dans le Conflit Européen;* the before-quoted *Story of the Lafayette*



PRÉSIDENCE
DE LA
RÉPUBLIQUE

Paris, le June 1918

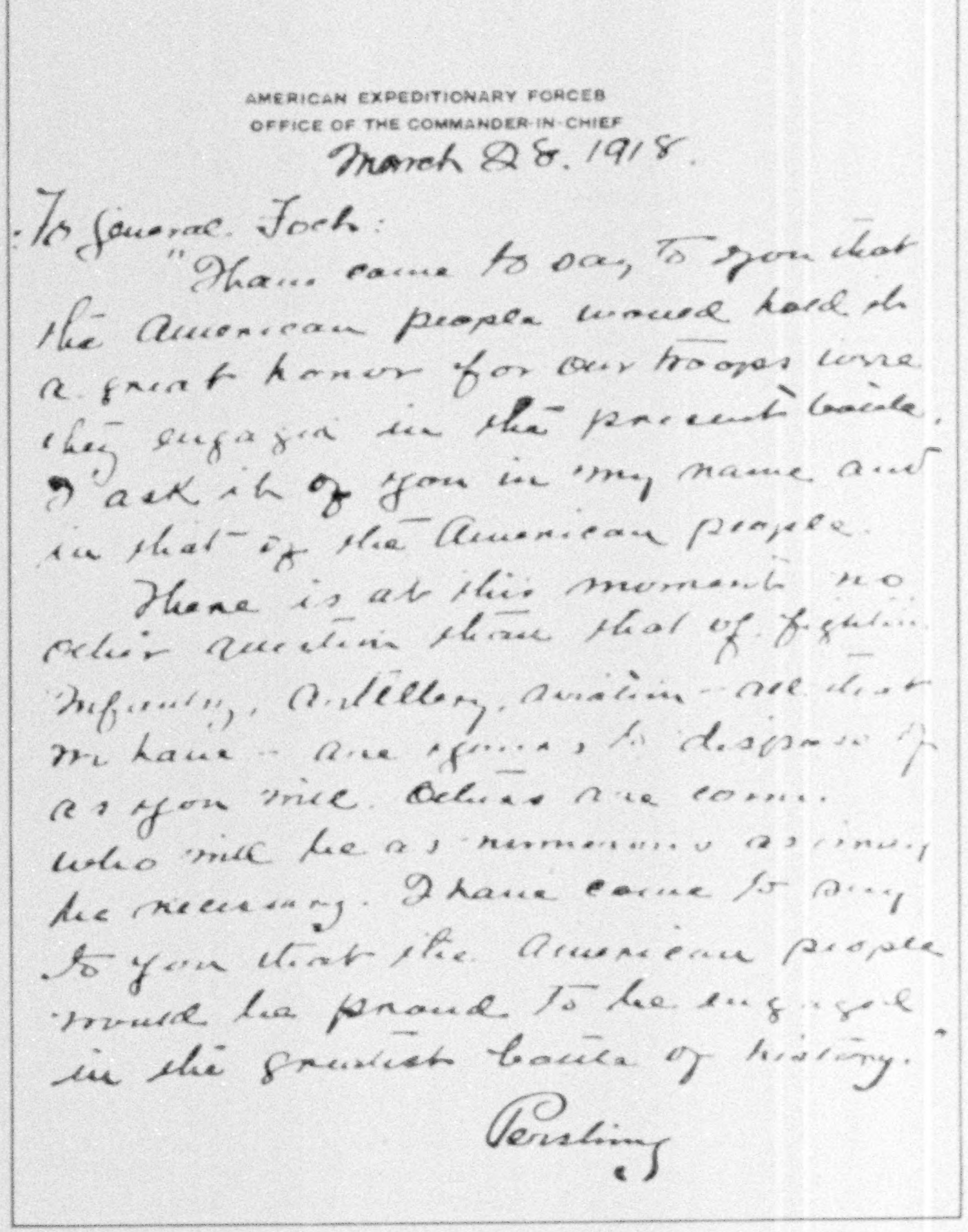
France is very glad to welcome the gallant american soldiers who cross the sea and will soon fight in Europe against the common enemy for right and freedom.

As your great President recently wrote to me, « it is only by victory that peace can be achieved » This necessary victory you shall win with your allied comrades.

France cheerfully expects you and will receive you to morrow with her hurrahs.

Raymond Poincaré

PRESIDENT POINCARÉ SENT A CORDIAL GREETING



AMERICAN EXPEDITIONARY FORCES
OFFICE OF THE COMMANDER-IN-CHIEF

March 28. 1918.

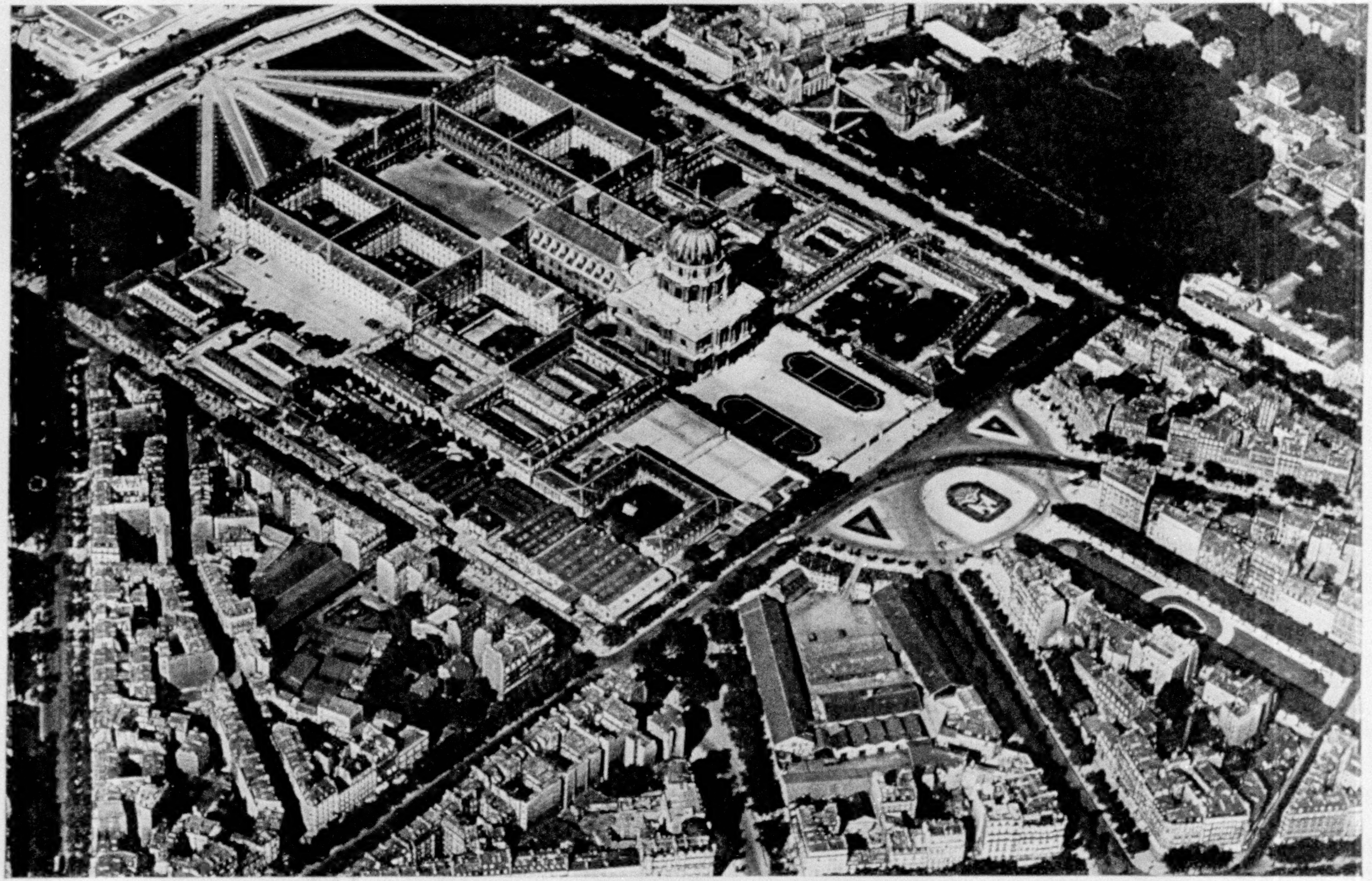
To General Foch:

"I have come to say to you that the American people would hold it a great honor for our troops were they engaged in the present battle. I ask it of you in my name and in that of the American people.

There is at this moment no other question than that of fighting. Infantry, artillery, aviation—all that we have—are yours to dispose of as you will. Others are coming who will be as numerous as may be necessary. I have come to say to you that the American people would be proud to be engaged in the greatest battle of history."

Pershing

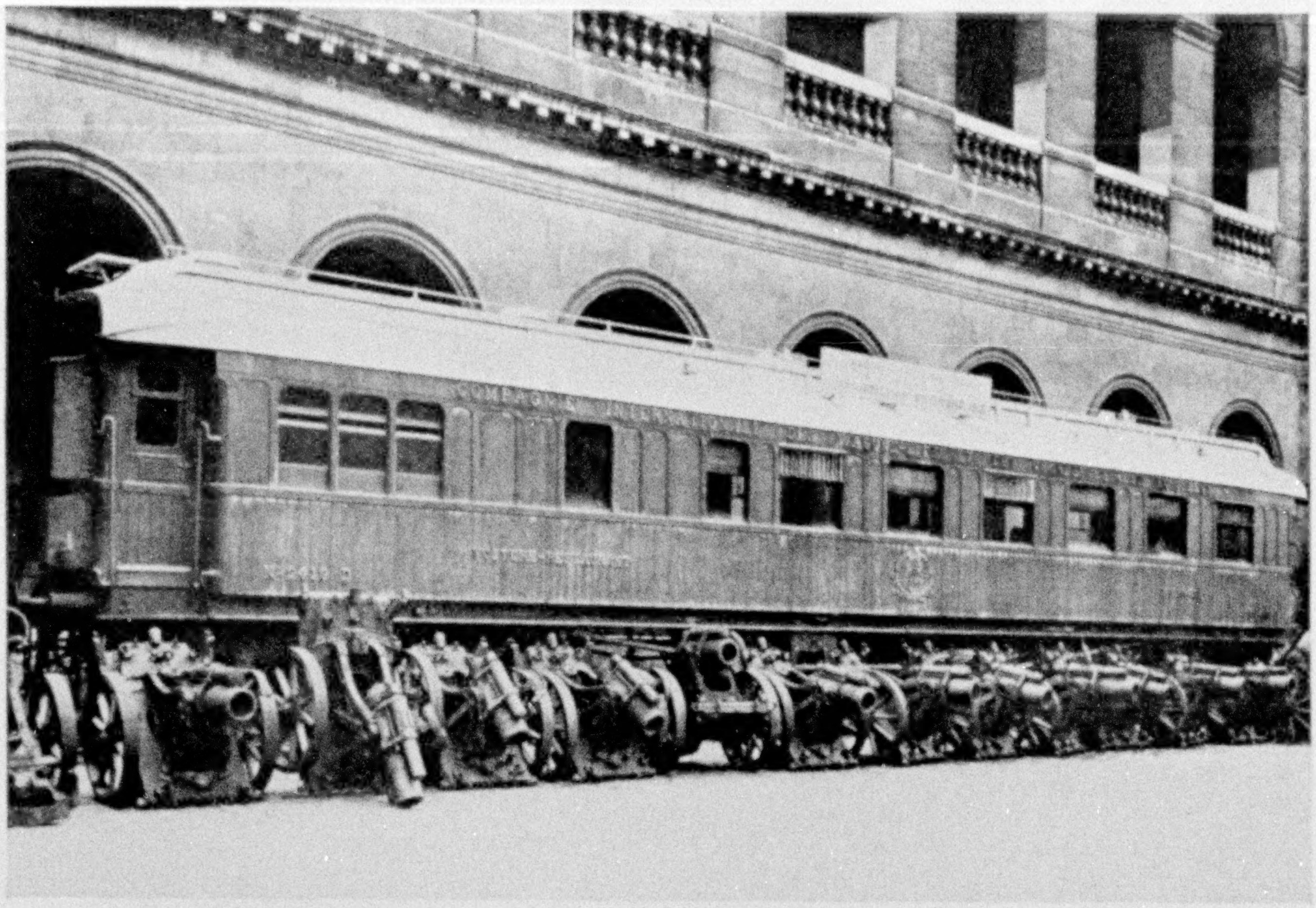
PERSHING'S MESSAGE TO FOCH WAS BRIEF AND SOLDIERLY



Photograph by Compagnie Aérienne Française

HERE LIVES FOR AYE THE SPIRIT OF MILITANT FRANCE

The Hôtel des Invalides, founded by Louis XIV and begun in 1671, was built to house 5,000 to 7,000 disabled veterans, but to-day it is a museum of arms and shelters only about 80 old soldiers, who act as guides. The seat of French military affairs was moved to this building in 1898. Under the dome is the tomb of Napoleon. At the right side of the rectangular court, shown slightly above and to the left of the main structure, is the railway coach in which the Armistice was signed (see, also, illustration, page 542).



Photograph by Ewing Galloway

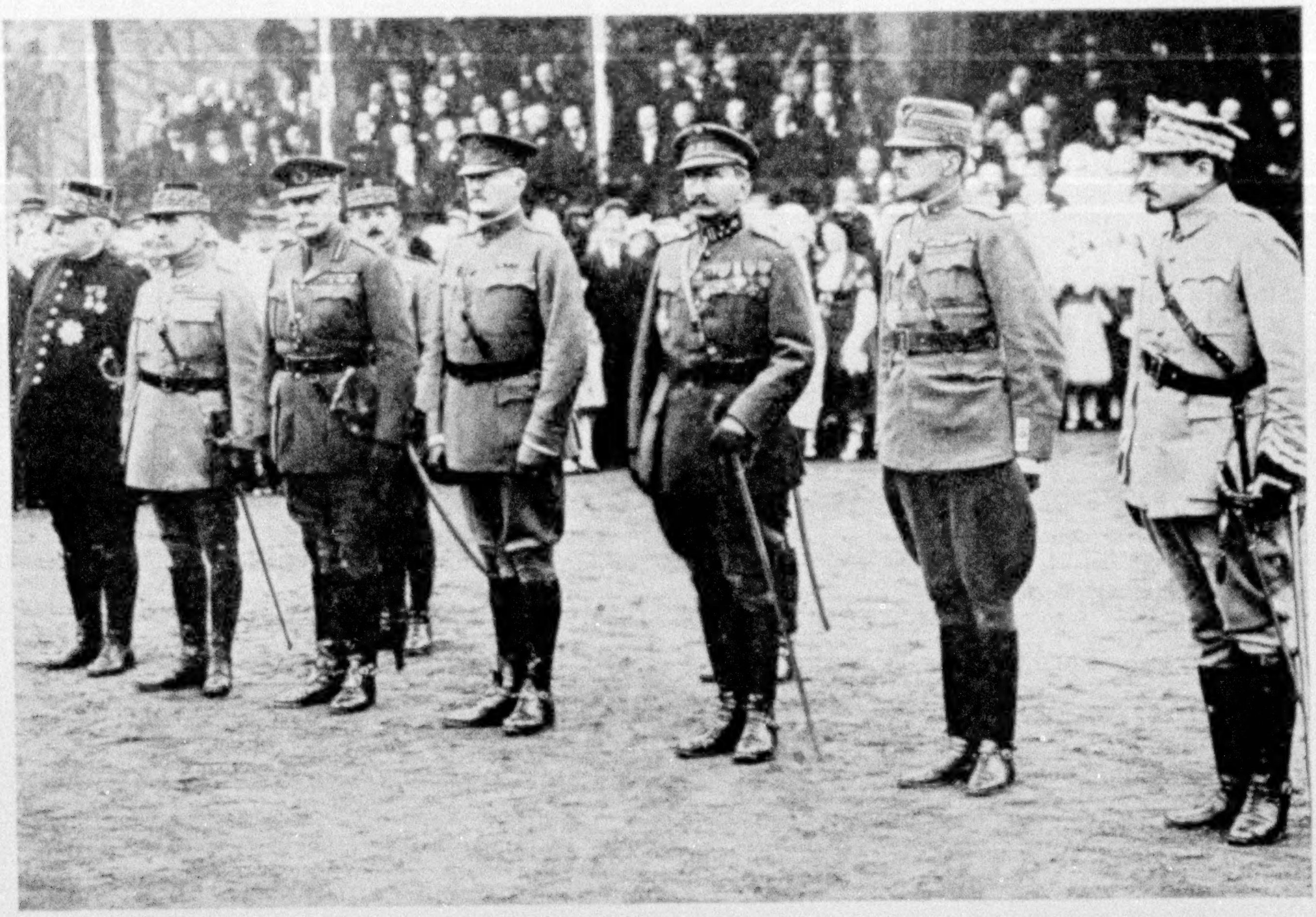
IN A SIMPLE RAILWAY CAR THE ARMISTICE WAS SIGNED

No panoply of glory surrounded the men who brought to a close the greatest war in history. The coach wherein the actual ceremonies took place now stands in the court of the Hôtel des Invalides, in Paris.

Photograph by U. S. Army Signal Corps

FRENCH GRANDMOTHERS INTRODUCE BOYS FROM OVERSEAS TO THE NATIVE ARGOT

American soldiers spent much of their time while resting behind the lines in trying to master the language of the country they had come so far to help defend.



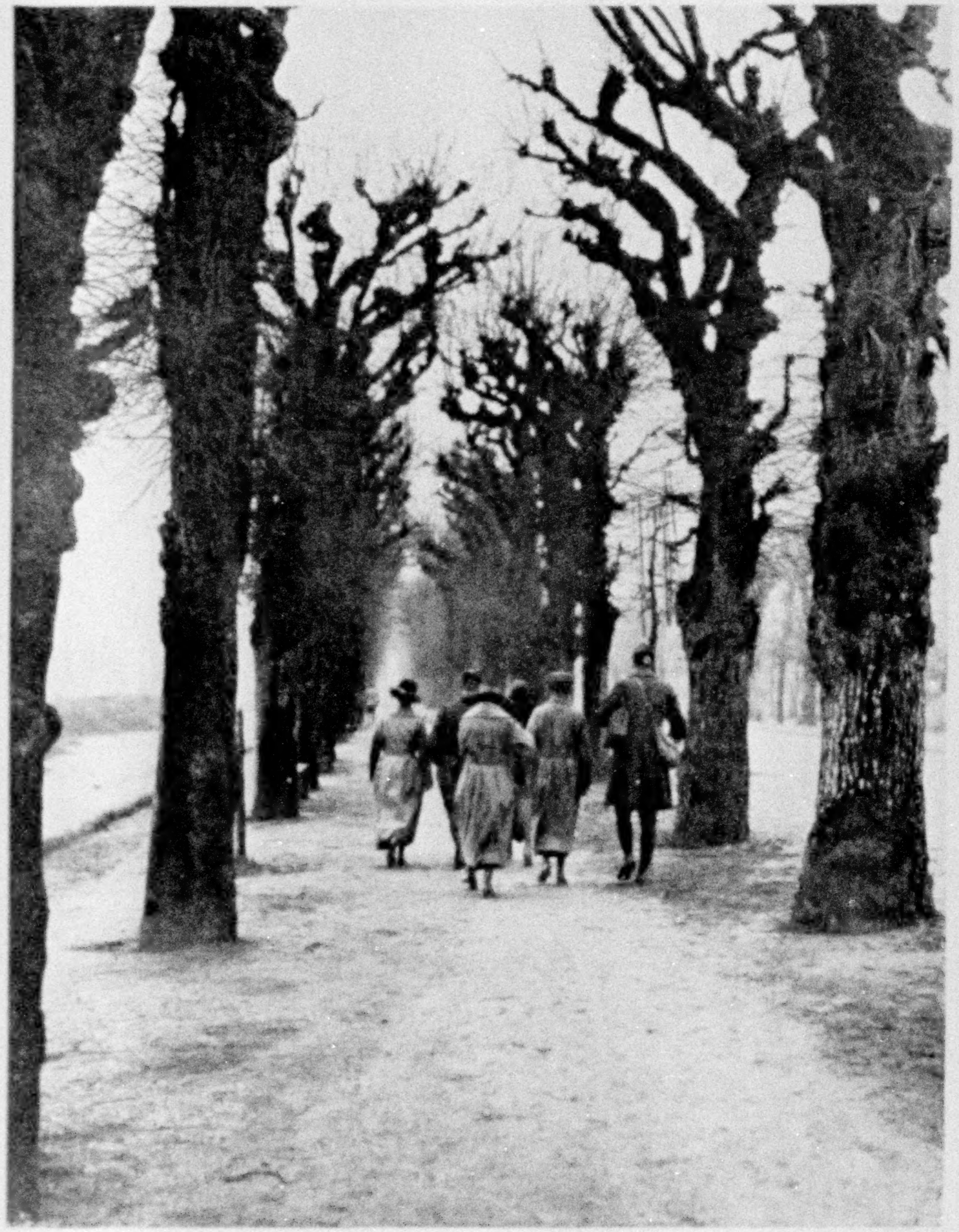
FAMOUS SOLDIERS HONOR A COMRADE IN ARMS

At the ceremonies when General Pétain was made a marshal, Marshals Joffre and Foch represented France; Field Marshal Haig, Great Britain; General John J. Pershing, America; General Gillain, Belgium; General Albricci, Italy; and General Haller, Poland.

Photographs by U. S. Army Signal Corps

FRANCE LENDS A HAND ON WASH DAY

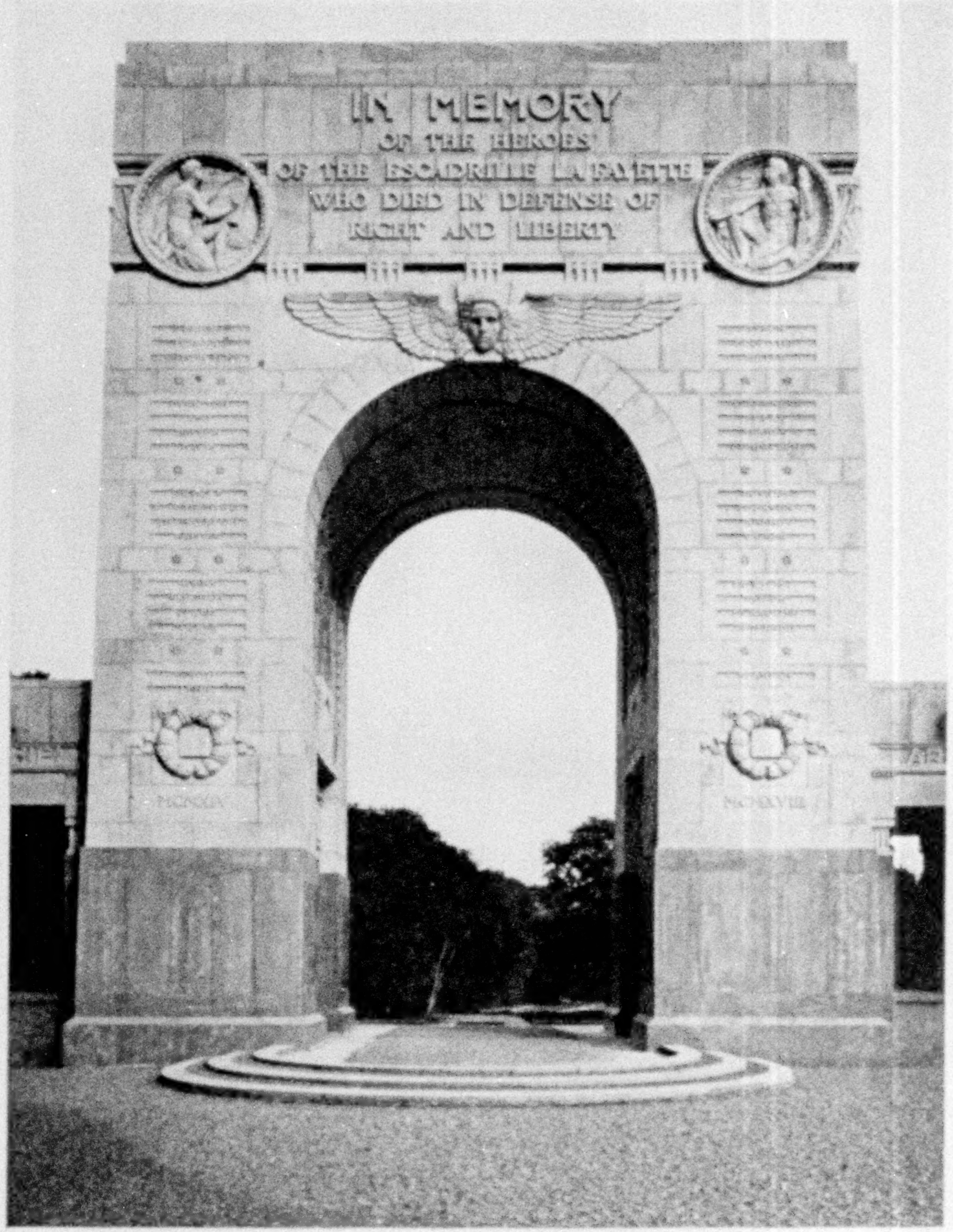
A typical French peasant woman is helping an American doughboy to wring out his laundry. The soldier seated, with a child on his knee, was killed in action a few days later.



Photograph by Clifton Adams

A WAR-SCARRED ROAD NEAR CHÂTEAU-THIERRY

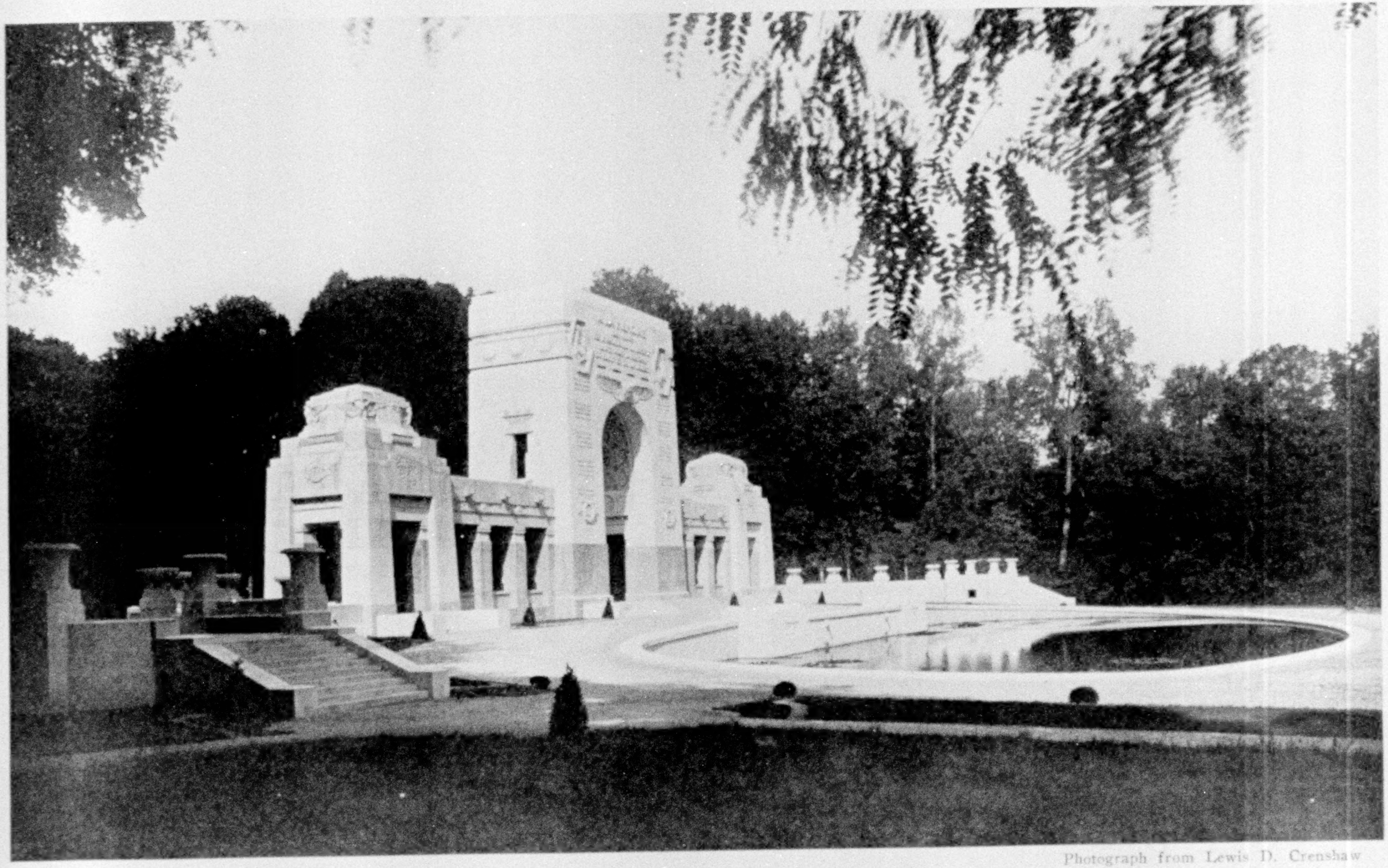
Where before the war great trees formed arches of foliage over the highways, only ravaged trunks remained after four years of intermittent machine-gun fire and artillery bombardment.


IN MEMORY
OF THE HEROES
OF THE ESCADRILLE LA FAYETTE
WHO DIED IN DEFENSE OF
RIGHT AND LIBERTY

Photograph from Lewis D. Crenshaw

MEMORY O'ER THEIR TOMB A STATELY TROPHY RAISED

Above the archway at the back of the Layafette Escadrille Memorial appears in English the same sentiment that is inscribed in French on the front (see illustration on opposite page).



Photograph from Lewis D. Crenshaw

HERE SLEEP 67 AMERICAN EAGLES WHO DIED FIGHTING FOR FRANCE

The magnificent Lafayette Escadrille Memorial, which stands in the park of Villeneuve l'Etang, halfway between Paris and Versailles, was dedicated with impressive ceremony on July 4, 1928, in the presence of Marshal Foch, Minister of War Painlevé, Ambassador Herrick, and scores of flying aces of both the United States and France. On the faces of the arch are inscribed the names of the dead and the living members, both of the Escadrille and the Lafayette Flying Corps (see, also, text, pages 509-511).

© Underwood and Underwood

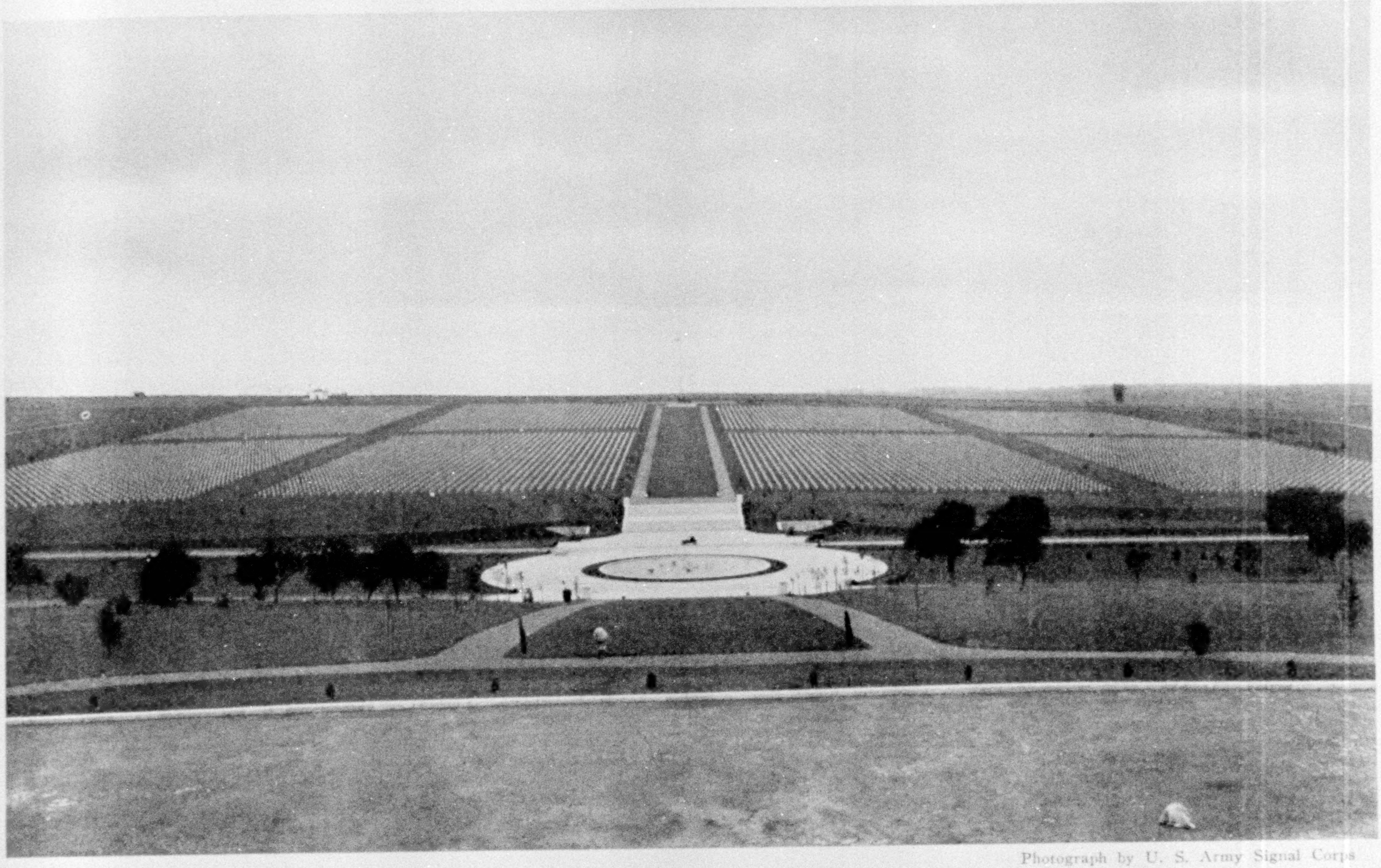
"LES AMÉRICAINS" SEE SOMETHING OF ABSORBING INTEREST

These fortunate young members of the A. E. F. were billeted in a French town famed afar for the beauty and charm of its feminine inhabitants.

Courtesy American Legion Monthly

"OLD GLORY" FLOATS ABOVE A BIT OF HALLOWED GROUND

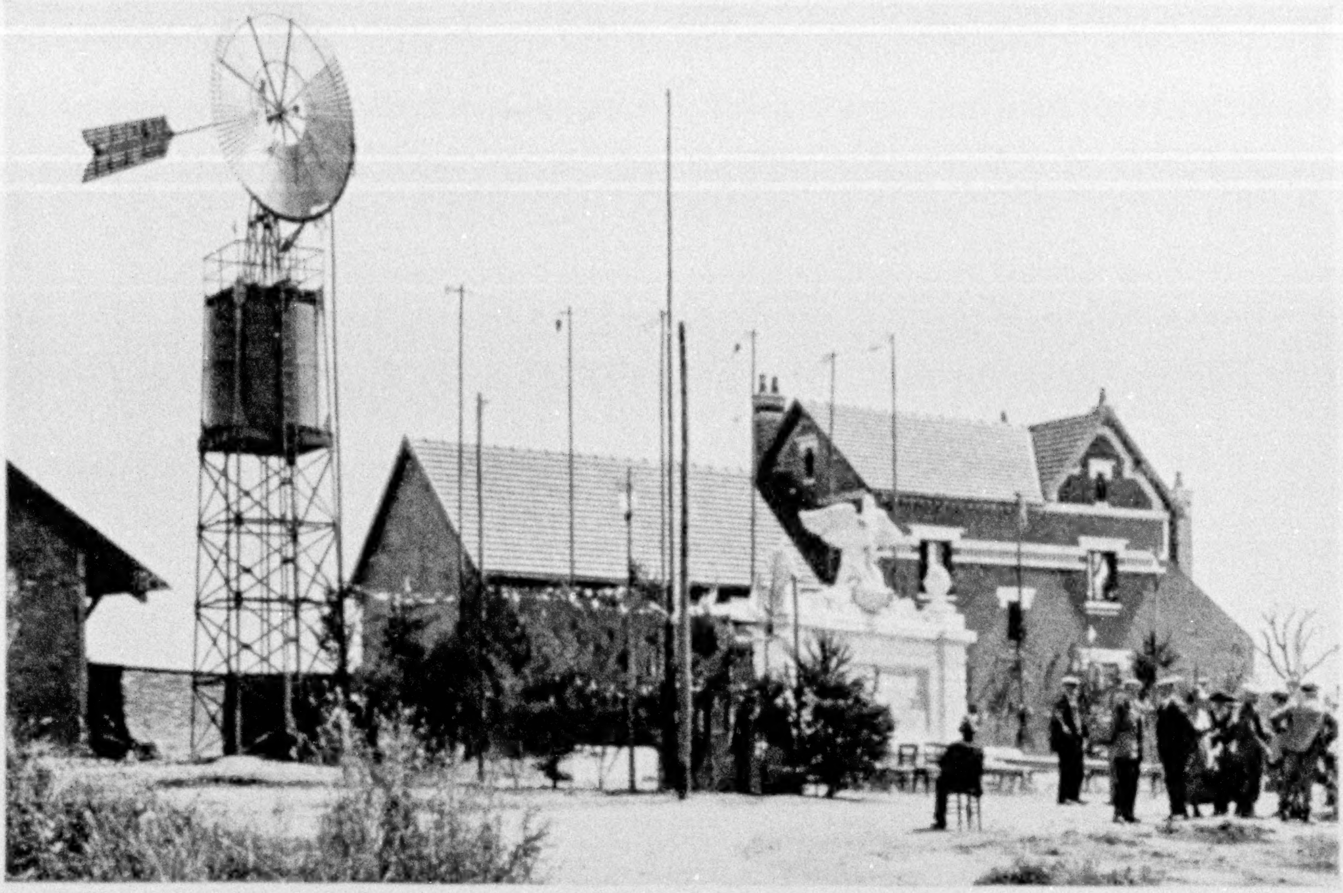
Under the shadow of their country's flag, in the cemetery at Suresnes, near Paris, 1,506 Americans rest forever in the foreign soil they died to defend.



Photograph by U. S. Army Signal Corps

THE DEAD WHO REST AT ROMAGNE-SOUS-MONTFAUCON REPRESENT NEARLY EVERY DIVISION OF THE A. E. F.

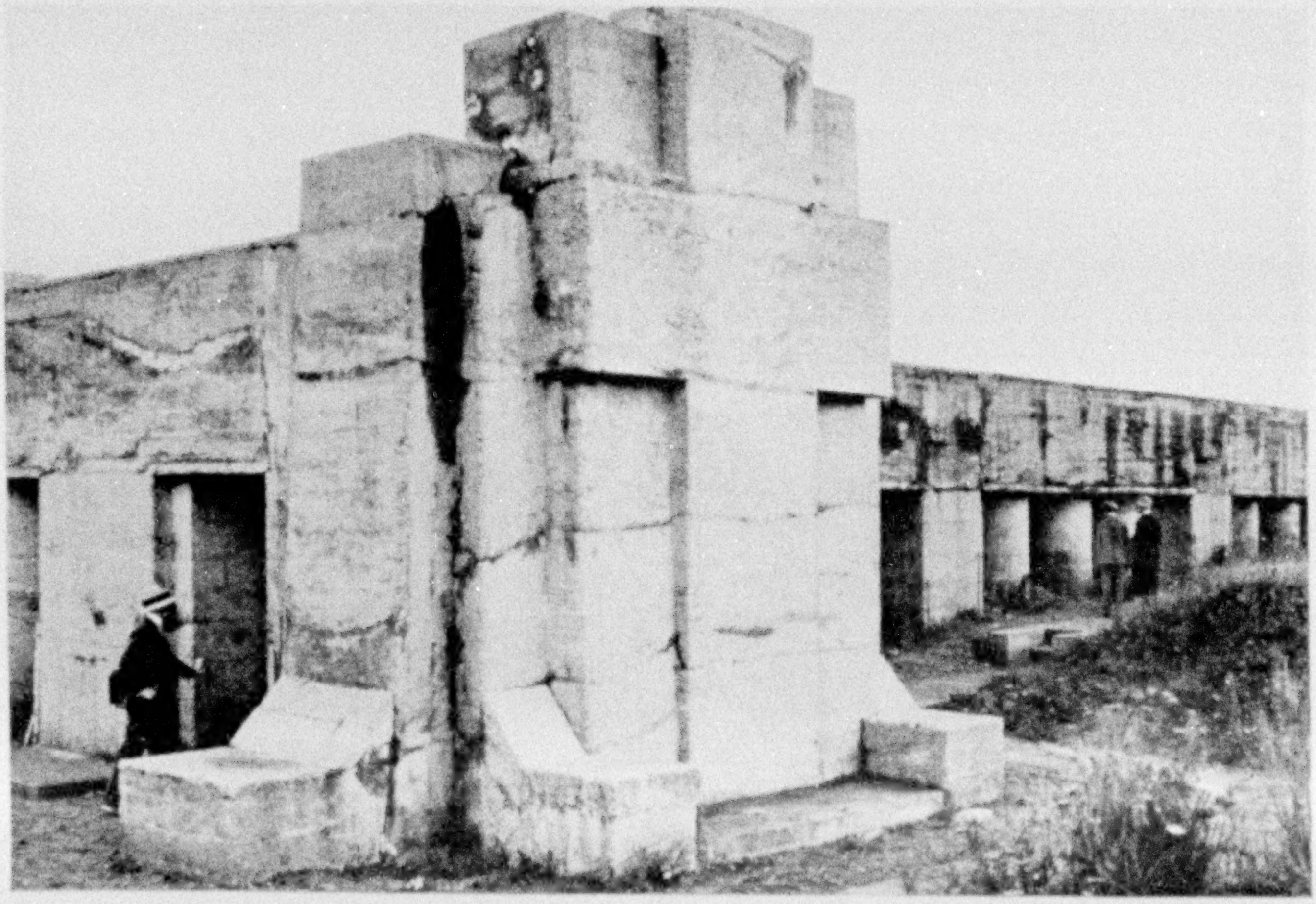
More than 14,000 of those who gave their lives for their country in 1917-1918 are buried in this largest of American overseas cemeteries. Most of them died in the Meuse-Argonne operation, one of the decisive battles of the war.



Photograph by Maynard Owen Williams

THE NATIONAL GEOGRAPHIC SOCIETY'S MEMORIAL AT THE SCENE OF AMERICA'S FIRST VICTORY IN THE WORLD WAR

In memory of our participation in the great conflict, The Society's membership erected at Cantigny a beautiful fountain and presented the rebuilt town with a complete water-supply system. The presentation was made on Bastille Day (July 14), in 1923.



Photograph by Holmes from Galloway

VERDUN KNOWS NO MORE TRAGIC SPOT THAN THE TRENCH OF THE BAYONETS

This concrete structure forever preserves the celebrated place where a detachment of French soldiers was buried alive by an exploding shell (see text, page 522, and Color Plate IV).

Escadrille, by Major Thénault (see text, page 510); the *Américains à Brest* of Mr. Chevrillon (see text, page 509), and several others. In the first of these works is the complete text of all the French citations in honor of the American units.

Civilians felt the same. As an example may be quoted the resolution voted, after the Belleau Wood victory, "in a congress of the mayors of the Meaux District, on the 25th of June, 1918," and which reads:

> "The mayors of the Meaux District, who were eyewitnesses to the generous and efficacious deeds of the American Army in stopping the enemy advance, send to that Army the heartfelt expression of their admiration and gratitude."
>
> (Signed) "G. LUGOL,
>
> *"Mayor of Meaux and Deputy of Seine-et-Marne."*

An address recently presented to the President of the United States has shown him that the memory of the unique services rendered by "Mr. Herbert Hoover" to the famished inhabitants of our devastated regions during the worst period has not and shall not sink into oblivion.

The twenty-five thousand or more American Legionnaires who revisited France two years ago and walked in the midst of enthusiastic crowds from the foot of the statue of Washington, Place d'Iéna, to the distant portals of Notre Dame, can testify to the liveliness of the still-surviving sentiment; by its warmth it was, in spite of the flight of time, a striking reminder of the reception given to the first American troops seen in Paris ten years before, when they had come as the harbingers of victory.

Photograph by U. S. Army Signal Corps

"ENTENTE CORDIALE"

Many a lasting friendship was established between the American soldiers and the French people with whom they lived and suffered during the years of the war.

FRANCE IS NOT FORGETTING

And just now, as I write, while the question of the debts is being debated in the French Chamber, not without asperity, Foreign Secretary Briand has chosen that moment to remind his hearers and the country at large of what we owe to the States, saying:

"I want that, in the midst of those discussions, sometimes bitter, people may feel the beatings of the heart of France and know that her gratitude still lives. . . . It is the duty of the one who has to-day the honor of directing the foreign policy of his country to cry out to that great, friendly people beyond the sea who have played their part in an especially dolorous hour in our history: 'France does not forget what you have done for her, be assured of that, and in spite of the untoward remarks which may be occasioned by this discussion about the debts, her gratitude remains intact, deep-seated in her heart.'"

Prolonged applause greeted those words.

Photograph by De Cou from Galloway

ROW AFTER ROW OF WHITE CROSSES MARK THE GRAVES OF AMERICAN DEAD

In the years since the World War thousands of friends and relatives from the United States have made the solemn pilgrimage to the graves of their warrior dead in France. Most of those buried in this cemetery lost their lives at Belleau Wood and Château-Thierry.

Signs abound indeed that France does not forget. At the long-established French Mint, Quai de Conti, Paris, where events in the history of the country are commemorated in bronze, silver, and gold, two parallel series of medals, preserved in the same glass case, are of special interest. One, by famous engravers of those days, tells of American Independence, of the relief of Boston by Washington, the Battle of Cowpens, the surrendering of Burgoyne at Saratoga, of "Libertas Americana" won at Yorktown, and includes portraits of Franklin, Lafayette, Paul Jones; the other, begun a century and a half later, engraved also at the time of the events, shows the landing of the first American troops in 1917, the taking of Saint-Mihiel; represents General Pershing and, among others, the late departed beloved Ambassador of the United States, Myron T. Herrick.

An extraordinary similitude between the two series of events is thus recalled. The similitude is so great that, in a number of cases, the leaders in the recent drama used unawares the same words and acted in the same fashion as their forbears in the days of the War of Independence.

We had declared then, in advance, that we would accept no recompense, no annexation, no compensation of any sort, stating, in the only treaty of alliance ever concluded by America, that we "renounced forever the possession . . . of any part of the continent of America which, before the Treaty of Paris, in 1763, or in virtue of that treaty, was acknowledged to belong to the Crown of Great Britain," and that we had only one object, which was "to maintain effectually the liberty, sovereignty, and independence, absolute and unlimited, of the United States" (February 6, 1778).

A few days later Count Vergennes had written to Marquis de Noailles, French Ambassador in London (and uncle of Lafayette): "We have desired to secure for ourselves no advantage of which other nations might be jealous and which the Americans might regret, in the course of

Courtesy American Legion Monthly

AN AGED FRENCH COUPLE GREET THEIR LIBERATORS

"Who are you? Who won the war?", asked Mr. and Mrs. Jacques Baleaux of these American doughboys in Brieulles, Ardennes, France, when their four years' imprisonment in the town ended, as the Germans retired before the advance of our victorious troops in 1918.

time, to have granted us" (March 10, 1778).

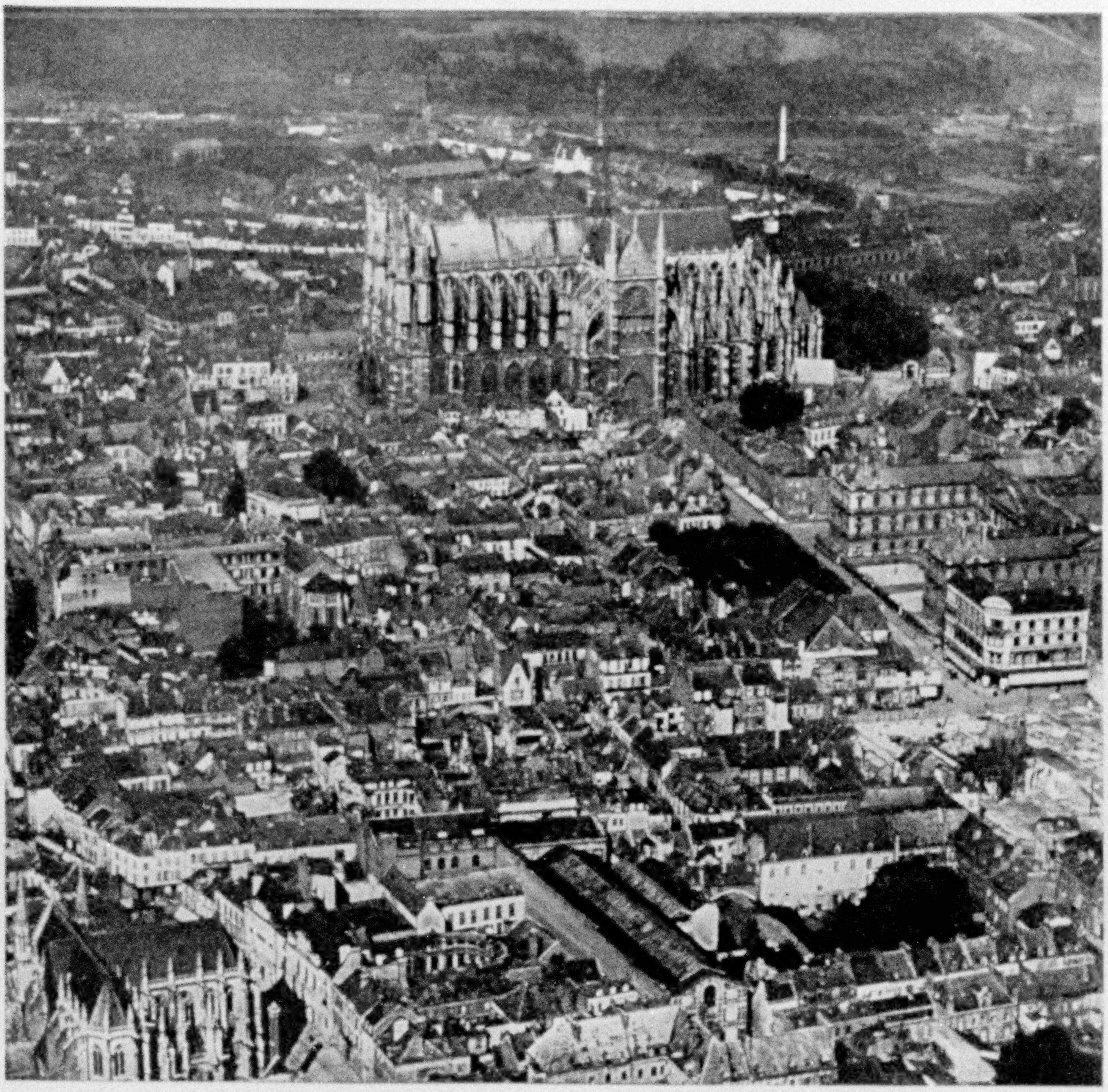
Such a disposition was unexampled then in the annals of mankind. It is no longer unique. When America entered the war President Wilson declared to Congress: "We have no selfish ends to serve. We desire no conquest, no dominion. We seek no indemnities for ourselves, no material compensation for the sacrifice we shall freely make. We are but one of the champions of mankind". (April 2, 1917).

HOW SACRIFICE SERVED THE TWO NATIONS

Thinking of the way the world might be reorganized after the war, the President spoke to me once of his idea of mandates to be established over various African or Asiatic territories; he added that he had not yet definitively adopted it: "Revolve it in your mind and we shall speak of it again." I said, "Will the United States accept any such mandates?" "No," was the answer; "we are debarred by our pledge to accept nothing." And nothing was accepted.

But did the two nations really reap no profit at all by reason of their disinterestedness? Nothing is ever lost. Through our very refusal of any recompense in 1778, we won that American friendship that was to prove of such vital use a century and a half later. As for Americans, they derived from their victorious fight a revelation that, after the passing of so many years of peace and prosperity, they were not, as their enemies fancied, so deeply immersed in material interests that, at the call of Duty, they would not answer, *Adsum*, leaving behind families, wealth, and comfort, risking and often losing their young lives; and this advantage, too, that other nations would also know and be no longer tempted to dictate to them what they should or should not do, and by what lanes their ships should sail.

It is pretty well understood now throughout the world that such challenges would not be allowed to lie dormant, but would



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AMIENS WAS A PLACE OF TREMENDOUS STRATEGIC IMPORTANCE

This city, a junction point between the French and British forces, was the object of determined German attacks in the later stages of the war. Although other buildings suffered heavy damage from bombardment, the exquisite cathedral, with its richly decorated façades, escaped serious injury.

be accepted and with what results; which is for the country no mean advantage.

PERSHING AND ROCHAMBEAU VOICE THE SAME SENTIMENTS

Other similitudes abound. We had pledged ourselves in 1778 to "make all the efforts in our power." America, the President proclaimed, entered the fight to stay in it until "the last gun is fired."

On the 28th of March, 1918, the day after General Foch had been appointed Commander-in-Chief of all the Allied Armies, and the situation, which he was to clear, was so grave, General Pershing came to meet the Commander at Clermont-sur-Oise, and in the courtyard of an old farm, with a cherry tree in full bloom, as a harbinger of spring, he used words so striking that General Foch asked him to repeat them in the presence of the other personages then in the house—Prime Minister Clemenceau, General Pétain, and Cabinet Minister Loucheur.

He repeated them. He was asked to put them in writing. They were sent to the press, went round the country, and created in those dark days an immense sensation. A medal was struck to commemorate them, and it figures now in the

Photograph by U. S. Army Signal Corps

GENERAL PERSHING SPARES A MOMENT TO CHAT WITH A YOUNG ADMIRER

Despite the weight of care and responsibility which was ever his, the Commander of the American Armies found time occasionally to enjoy the company of French children.

aforementioned collection (see text, page 551). It represents on one side the scene as it happened, with good likenesses of the participants; on the other side are engraved the words of Pershing:

"There is at this moment no other question than that of fighting. Infantry, artillery, aviation—all that we have—are yours, to dispose of as you will. . . . I have come to say to you that the American people would be proud to be engaged in the greatest battle of history" (see page 540).

The General had certainly not taken the trouble to inspect, at the Library of Congress, the papers of Rochambeau, whose "visit" he was returning, nor had he any thought of taking his cue from him. The fact is, however, that, shortly after his landing at Newport (after a crossing of seventy days), the French general had written to the President of Congress:

"We are your brothers, and we shall act as such with you; we shall fight your enemies as if we were one and the same nation" (August 3, 1780). To Washington he wrote at the beginning of what was to be the Yorktown campaign: "You will do with me what you please" (March 31, 1781).

Concerning allies, it may again be observed that they happen sometimes to admire each other's deeds of valor without always adding love to admiration. The differences in manners, languages, in the way of reacting under trial, are striking; private sneers sometimes accompany public admiration and friendship does not freely develop. Not so on the two occasions of world-wide importance when the French and the Americans fought the same war.

On the 20th of October, 1782, Washington wrote to Lafayette: "A greater harmony between two armies never subsisted than that which has prevailed between the French and Americans since the first junction of them last year."

On the 25th of July, 1918, I cabled to my Government an account of a conversation I had just had with President Wilson:

"I have spoken to the President of the sentiments of affection and admiration fostered in France by the Americans' fine conduct and, which is no disparagement to heroism, their inborn amiability. The two armies are rivals only in energy and valor, and each day we register with pride the results of their common efforts.

"The President congratulated himself with me on that fraternity of arms, those trials endured together, those victories won in common, which will have the most fruitful consequences later. He expressed the hope that, in spite of an unavoidable slowing up of our advance, a catastrophe was not impossible for the enemy."

In a final telegram sent to his Government just after the Armistice, General Pershing said:

"The French Government and Army have always stood ready to furnish us with supplies, equipment, and transportation and to aid us in every way. In the towns and hamlets, wherever our troops have been stationed or billeted, the French people have everywhere received them more as relatives and intimate friends than as soldiers of a foreign army.

"For these things words are quite inadequate to express our gratitude."

Nothing is more characteristic of those reciprocal dispositions than what took place at Verdun on the morning of that 11th of November, when the last gun was shot and the bugles sounded, "Cease firing!"

On that day, General Valentin told us, a promiscuous group of men wearing American uniforms met before the doors of the ruined cathedral. The enemy, owing to the disposition of the ground, could not see it, but had shelled it by the map, wrecking its old Gothic nave. The leader of the group explained that he was, in private life, a Catholic priest; that those with him were Catholics, Protestants, and Jews. They asked to be allowed to kneel before the altar and sing a thanksgiving hymn for the victory and the peace.

The General considered the request a legitimate one and ordered the doors to be opened. So the Americans, kneeling in the midst of the débris in front of the damaged altar, sang their hymn, and after that sang also the Star-Spangled Banner and the Marseillaise.

EMBLEM OF THE PAST AND THE FUTURE

Thereupon remembering that, while the nave had been shattered, the two towers on the west front had had only scratches, and that therefore the bells must still be there, General Valentin ordered them to be rung; so, for the first time since they had sounded the tocsin for the general mobilization, they pealed forth their chimes for victory. He ordered also the French and the American flags to be raised on the two sister towers, a platoon of French and American soldiers standing at attention.

An emblem of the past and, let us hope, of the future, too.

Well could the American Secretary of War of those days, Mr. Baker, end thus an article he wrote on the participation of the United States in the conflict and on the reasons for its coming in:

"Those who gave their lives may have had but an inexplicit consciousness of the thing at stake. Yet, in the last analysis, those who died in France died for the same great cause as those who fell at Brandywine. Spiritually, it was the guns of Bunker Hill and Yorktown that answered and overcame the torpedo and the submarine."

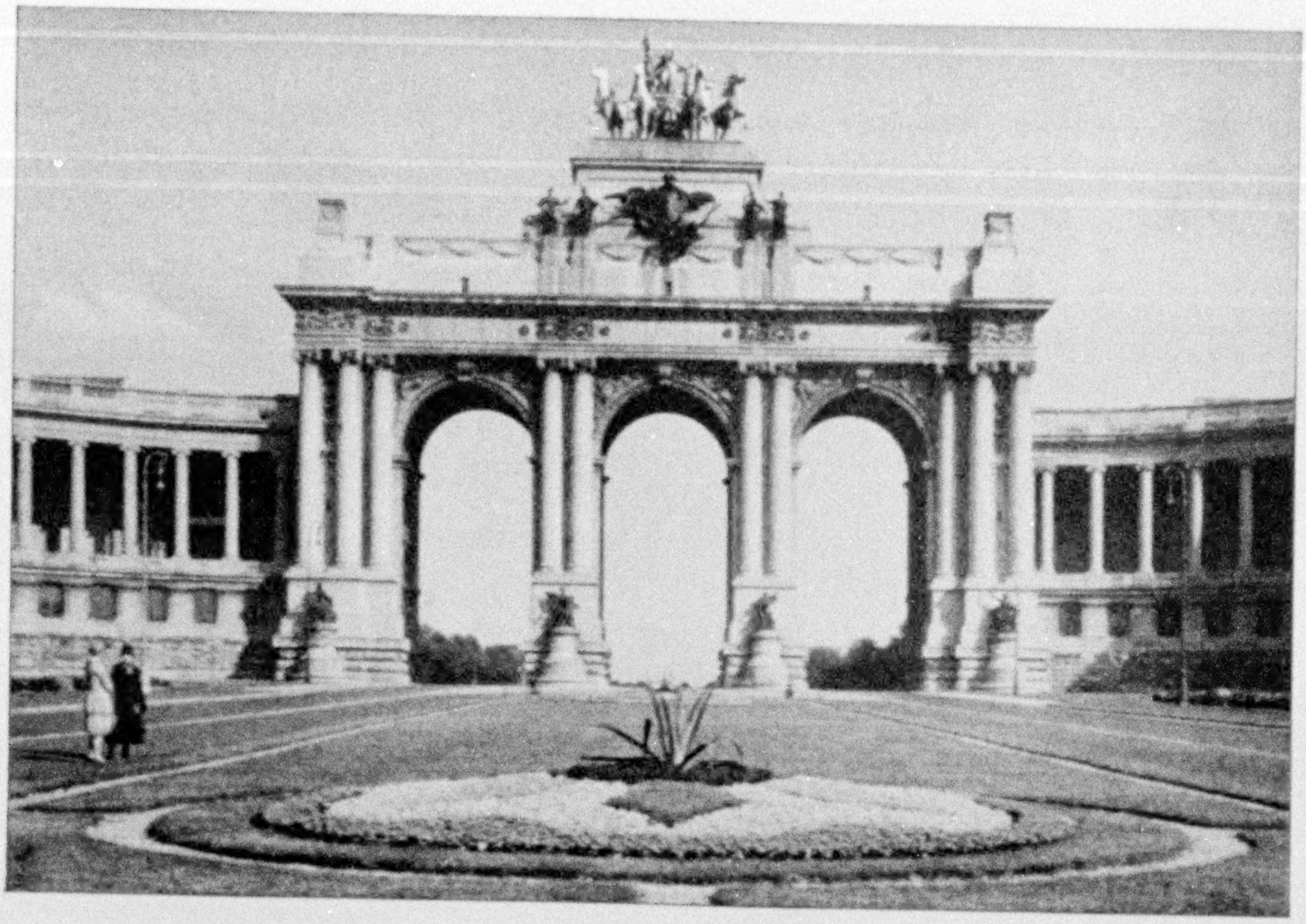
* * *

Once more since those great events the bugle has been heard. The Briand-Kellogg pact is an appeal to the world which will bring about results of immense importance, long hoped for in vain by mankind, provided it has been signed not only with golden pens, but with golden hearts, and these two tenets are put at last into practice: less ambition to the detriment of others, more charity.

It is a fact, however, and an important one, that once more the bugle has been heard:

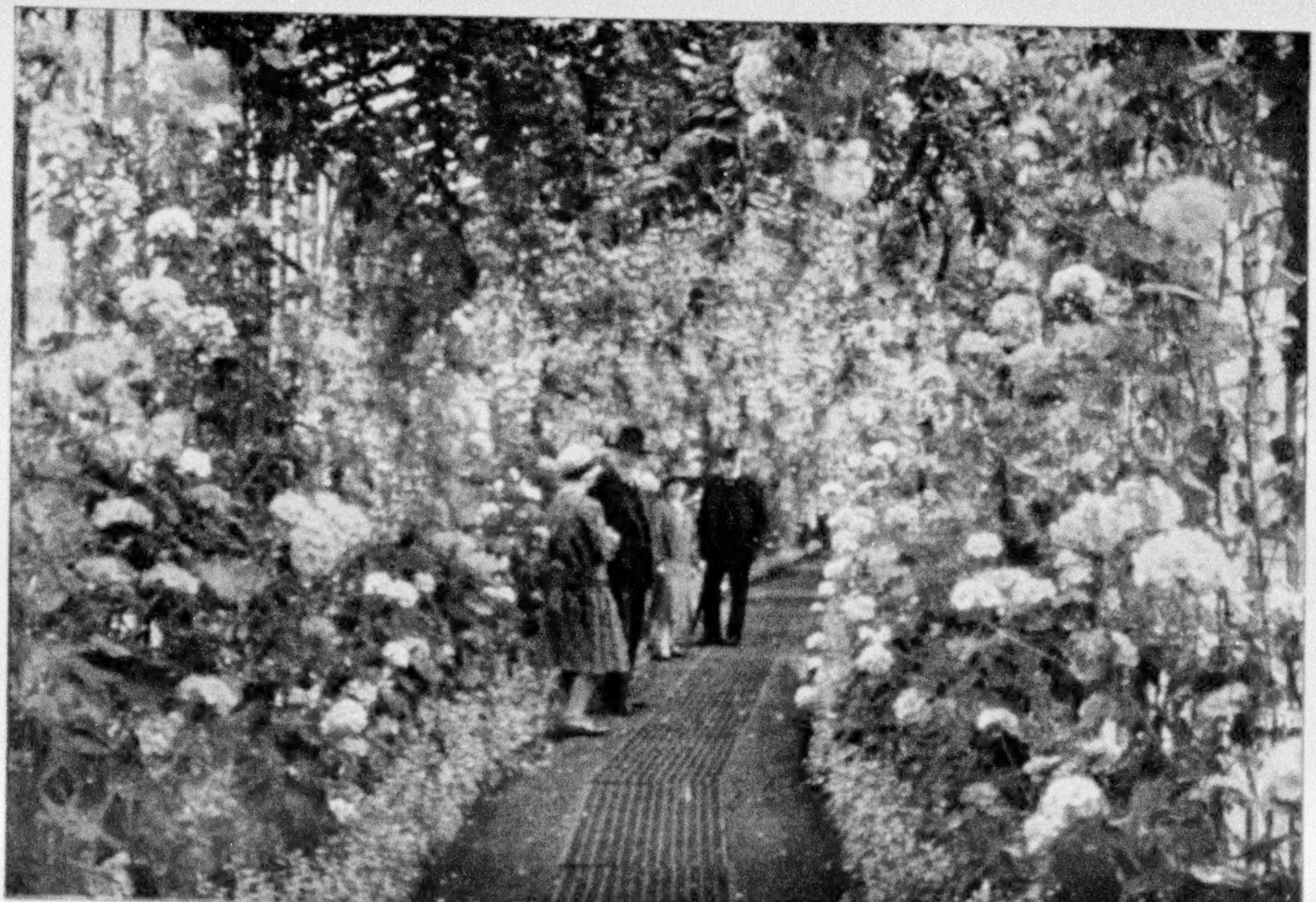
"Cease firing!"

* * *



A TRIUMPHAL ARCH TO FREEDOM AND UNITY

To finish the colonnade joining the wings of the Palais du Cinquantenaire, dedicated in 1880 on the 50th Belgian Independence Day, Leopold II erected this magnificent memorial at Brussels in 1905. The figures crowning the center represent Belgium and the Province of Brabant; those below the columns, the other provinces.



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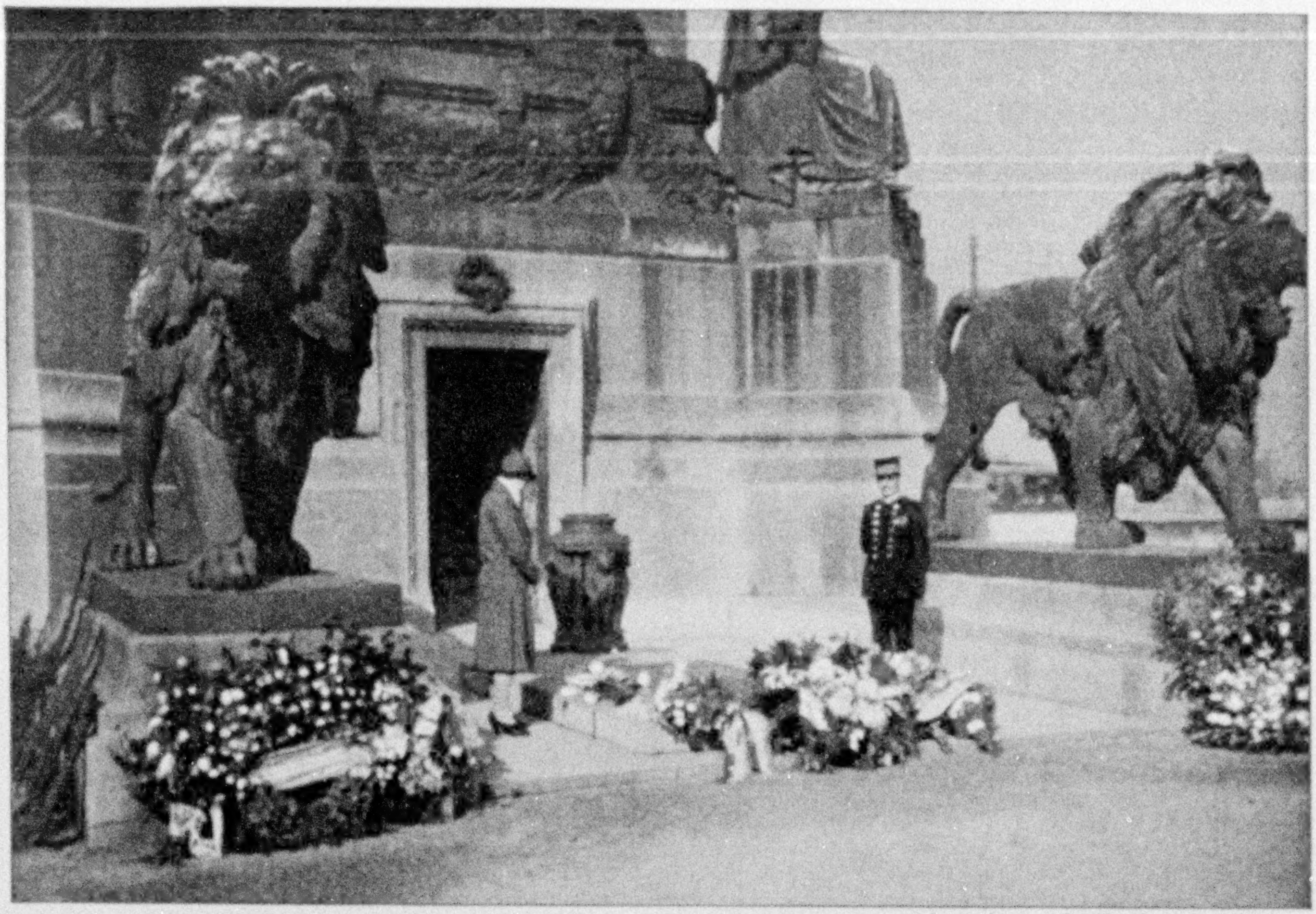
Autochromes by Prof. A. Buyssens

LAEKEN VISITORS WALK THROUGH A BOWER OF BLOOM 500 YARDS LONG

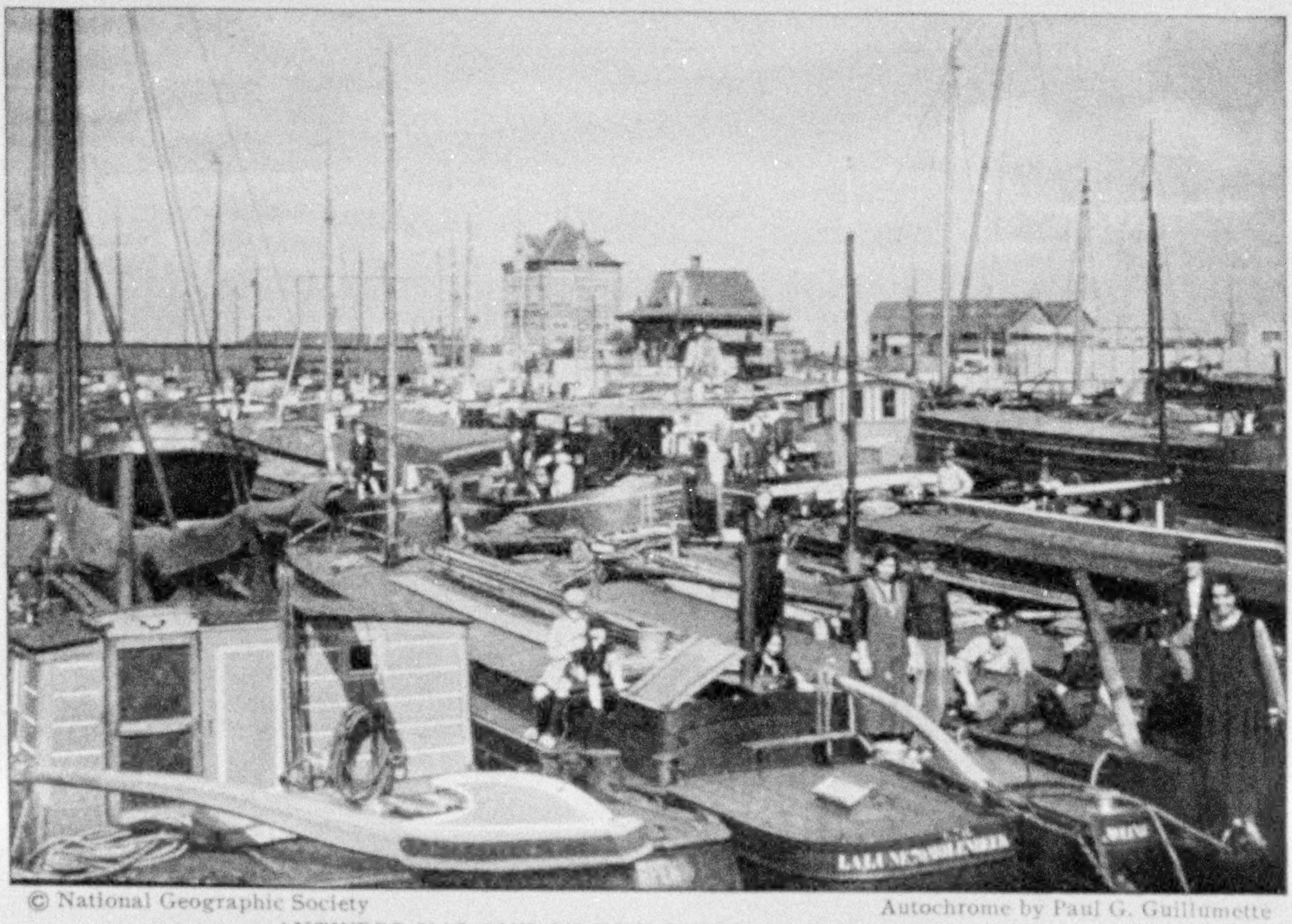
Fortunate indeed is the traveler who comes to this suburb of Brussels in the brief season in spring when the great flower galleries of the Royal Palace are open to the public. The display of azaleas in May is particularly charming. Belgium is a land prodigal of blossoms, but nowhere else in the country is such profusion of loveliness to be seen.



Autochrome by Prof. A. Buyssens

BETWEEN THE LIONS OF BELGIUM SLEEPS HER UNKNOWN SOLDIER

Brussels placed the shrine of the warrior dead at the foot of the Colonne du Congrès, a lofty shaft erected in 1850-59 in commemoration of the Revolution of 1830 and the beginning of Belgian unity. The spot for the grave is well chosen; for the heroic defense in 1914 knit the nine provinces together as never before.



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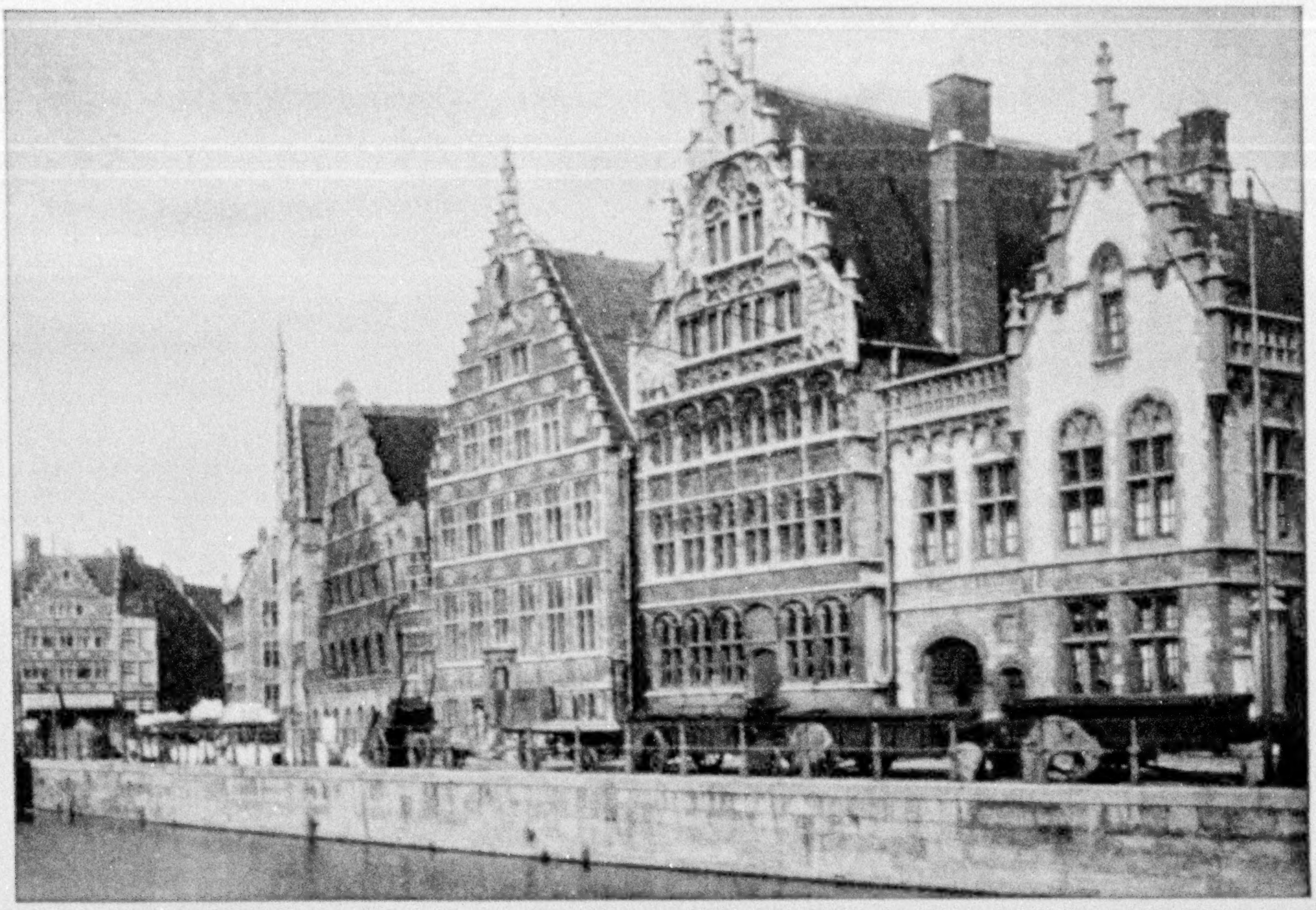
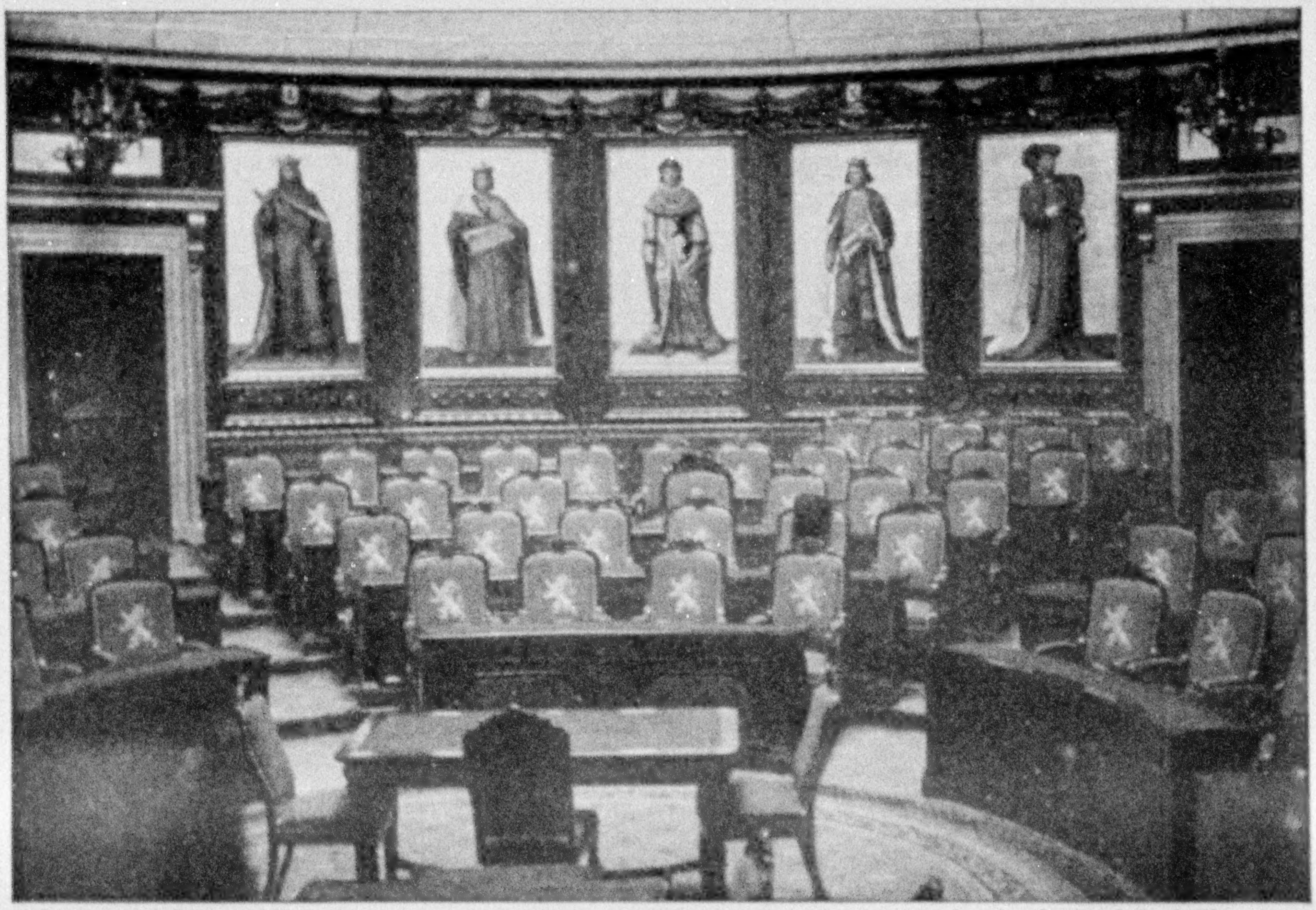
ANTWERP HAS ONE OF THE BUSIEST PORTS IN EUROPE

Begun by Napoleon I and extended in the 19th century, the quays stretch for three and one-half miles along the right bank of the Scheldt. They are equipped with a railway and hauling road. The largest vessels can come alongside without lightering, and ships of all nations may be seen at their moorings or berthed in the docks.



ANCIENT BUILDINGS LEND CHARM TO THE QUAI AUX HERBES IN GHENT

Fronting the River Lys, main artery of commerce, stands (second from the right) the famous Skipper's House, the finest guildhall in Belgium, built in 1531 and restored in 1904. To the left of it is the House of the Grain Measurers, 1698; and beyond that the 13th century Staple House, which burned but was rebuilt in 1896.



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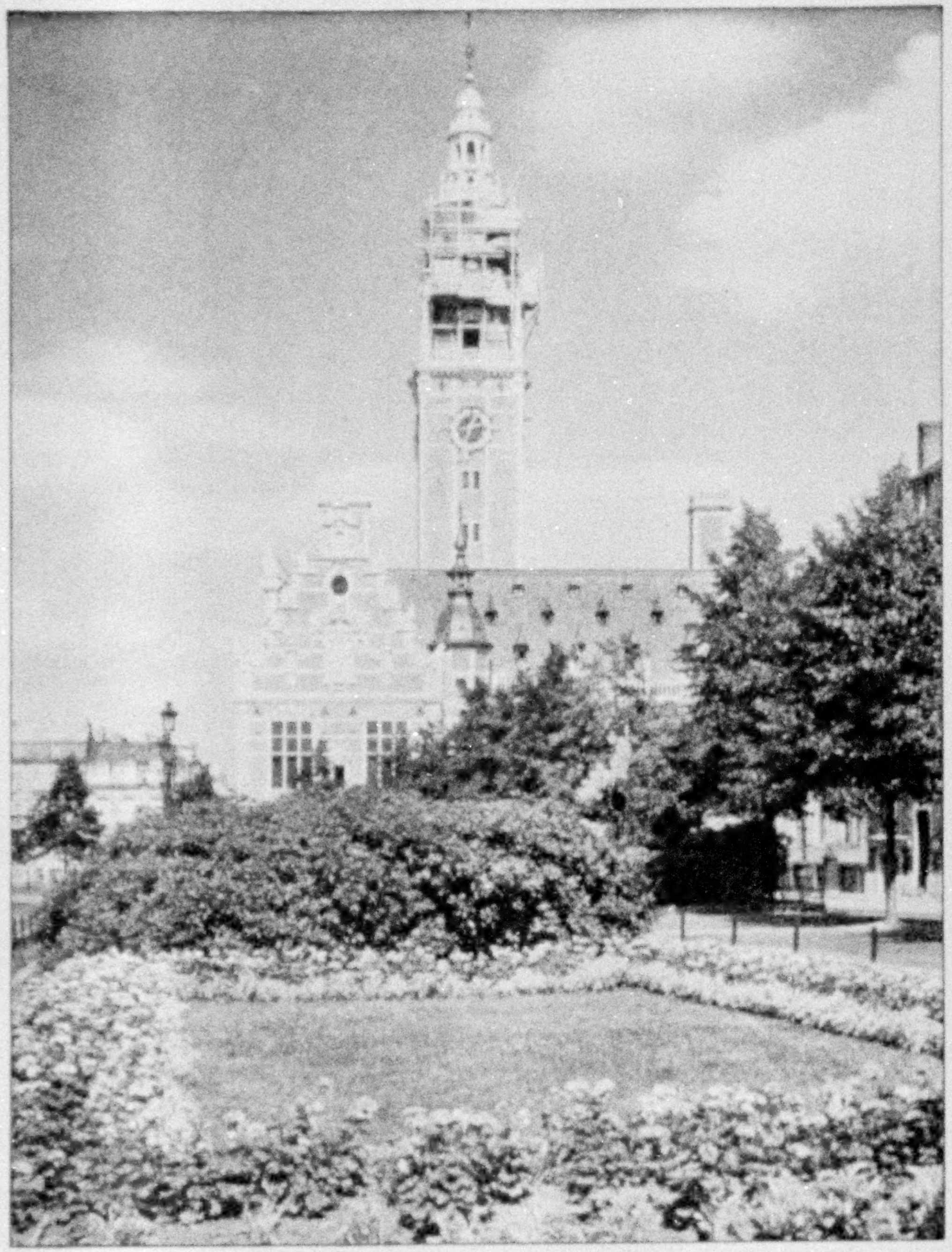
TRAGIC MEMORY LINGERS IN THE SENATE CHAMBER

It was in this room in the Palais de la Nation, Brussels, that a German court-martial condemned the heroic nurse, Edith Cavell. By the chair now draped with a black cloth (second row) she stood when she was sentenced. The high, carved seat in the third tier is that occupied by Crown Prince Leopold when he attends sessions of the Senate. Portraits of Belgian kings adorn the rear wall.



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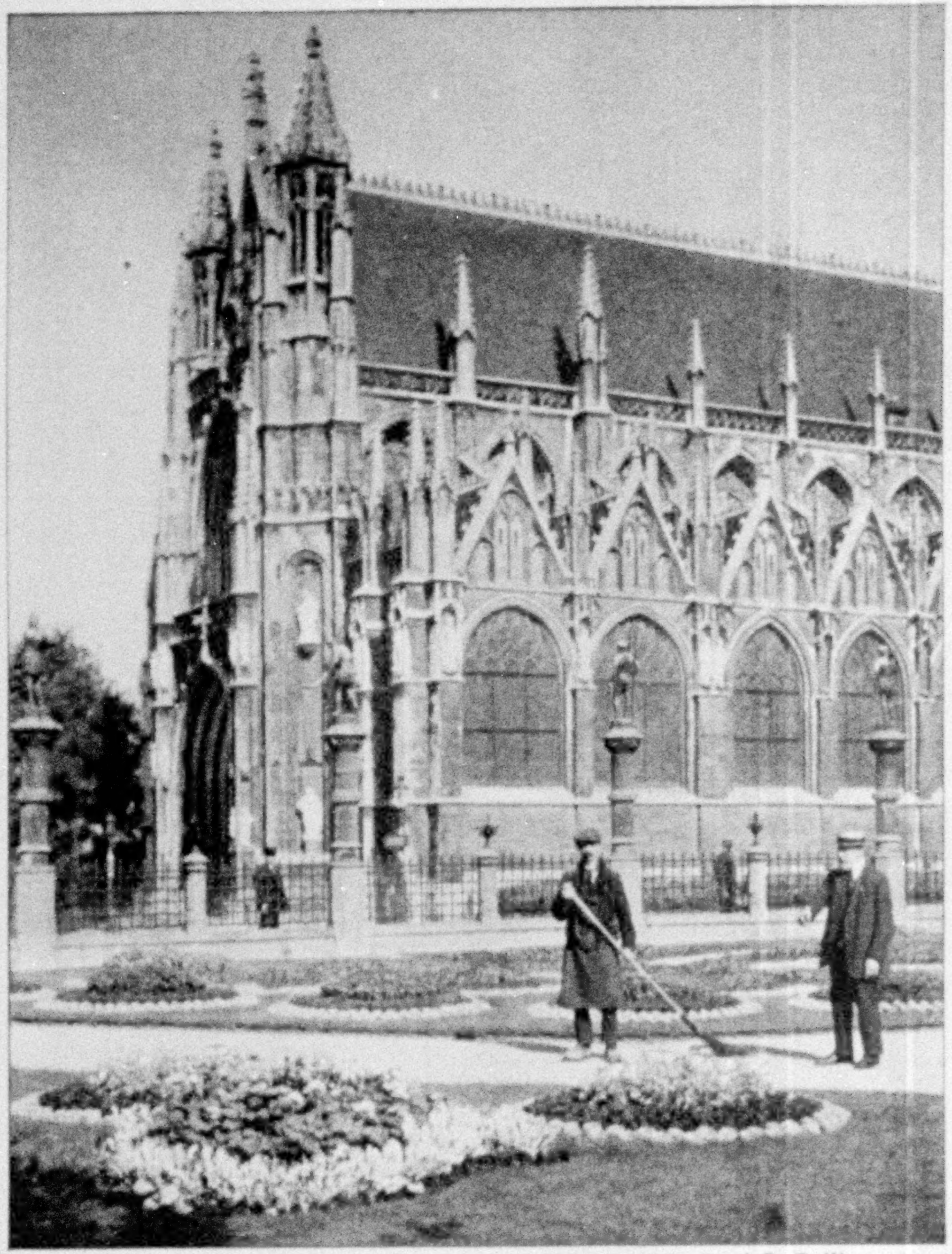
FROM WAR'S RUINS HAS RISEN A NEW TEMPLE OF BOOKS

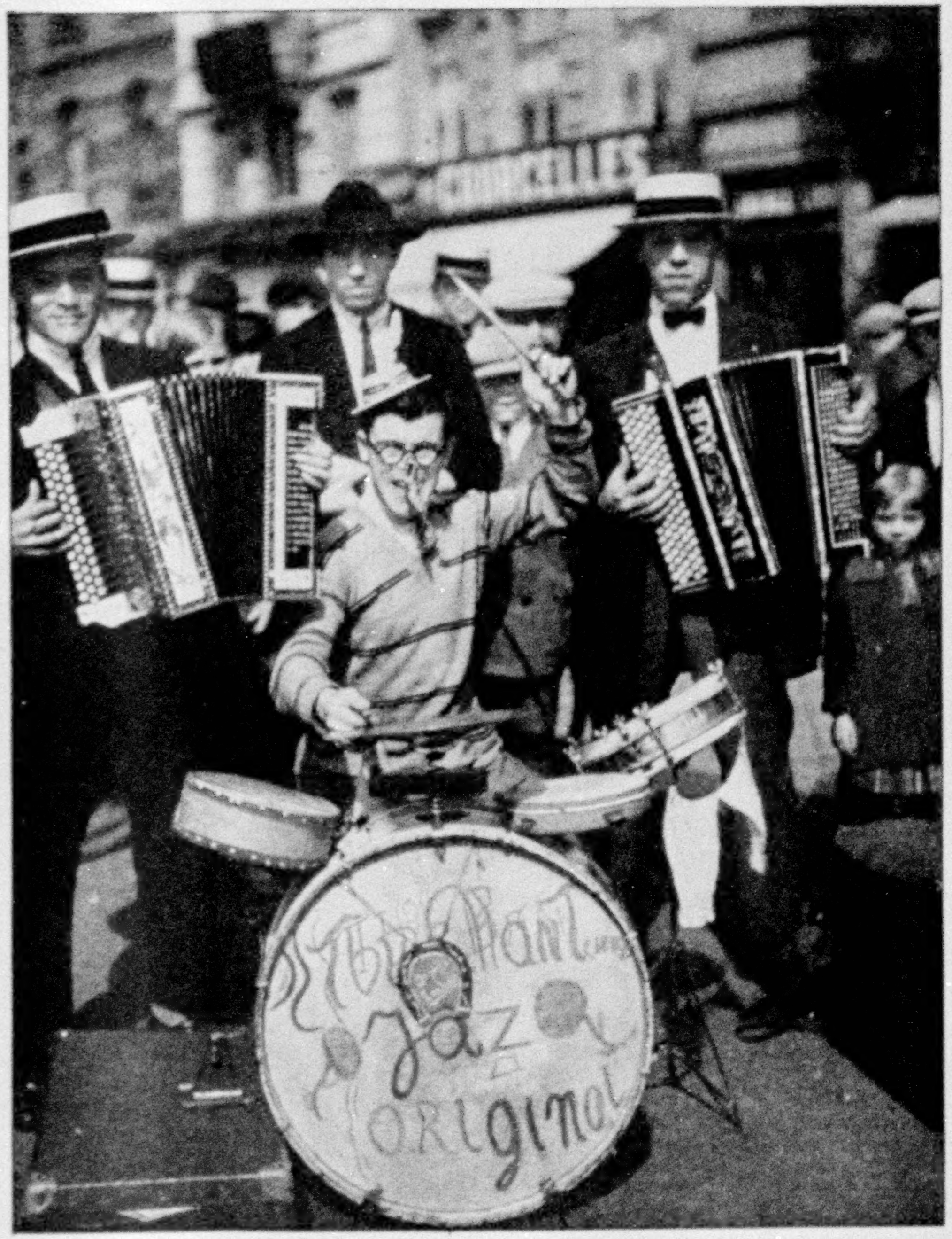
A disaster second only to the destruction of Reims Cathedral was the demolition during the World War of the University Library at Louvain, with its wealth of priceless manuscripts and 250,000 printed volumes. American gifts have made possible the new building shown here.



Autochromes by Paul G. Guillumette

GOTHIC GRACE CHARACTERIZES NOTRE DAME DU SABLON

This 15th century church in Brussels is notable for stained glass windows bearing ancient coats of arms. The poet Jean Baptiste Rousseau, who died in exile at Genette near by, is buried in the right transept. In the foreground is a part of the Place du Petit Sablon (see Color Plate XXIV).



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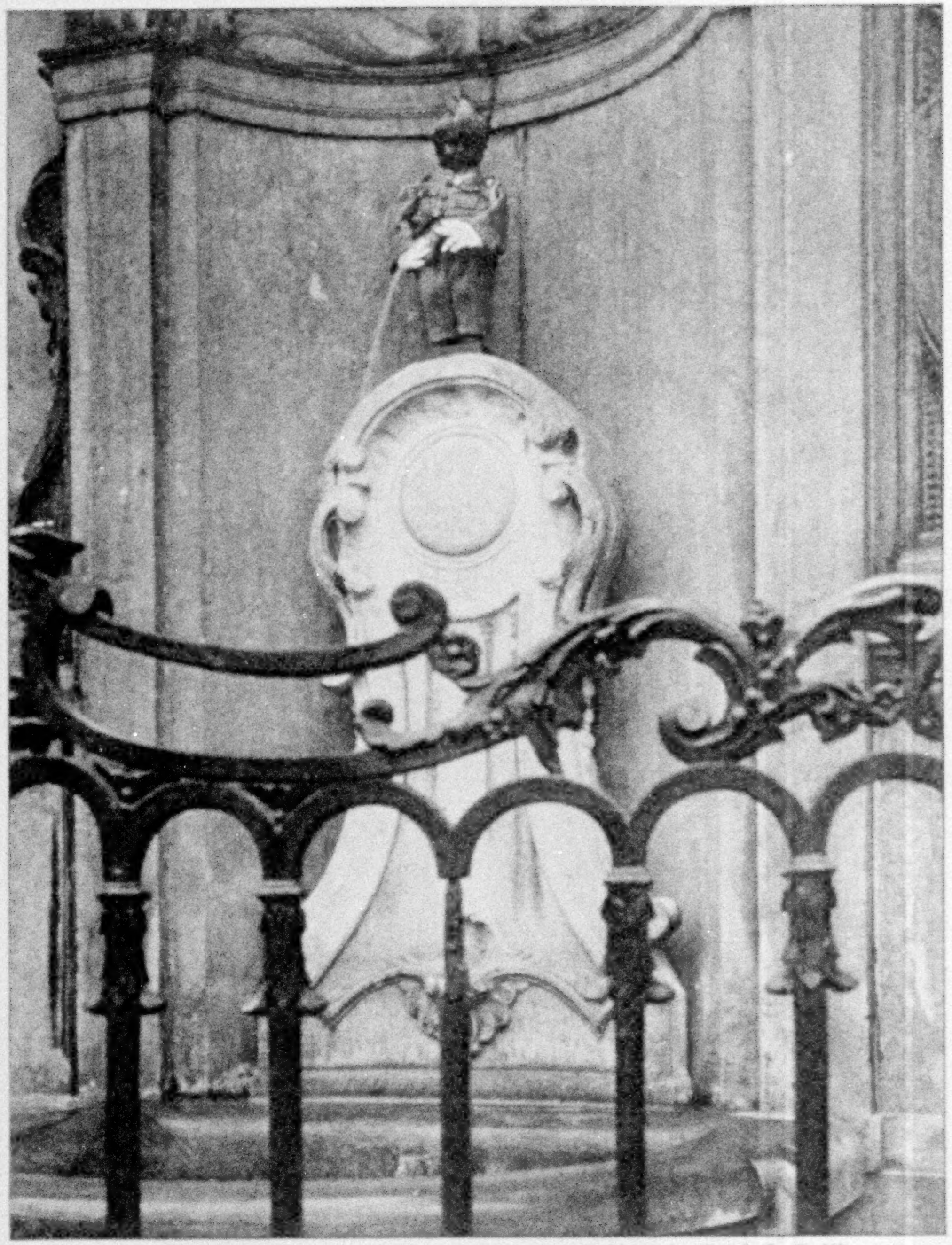
SONG "CLAQUERS" ARE MERRY FELLOWS

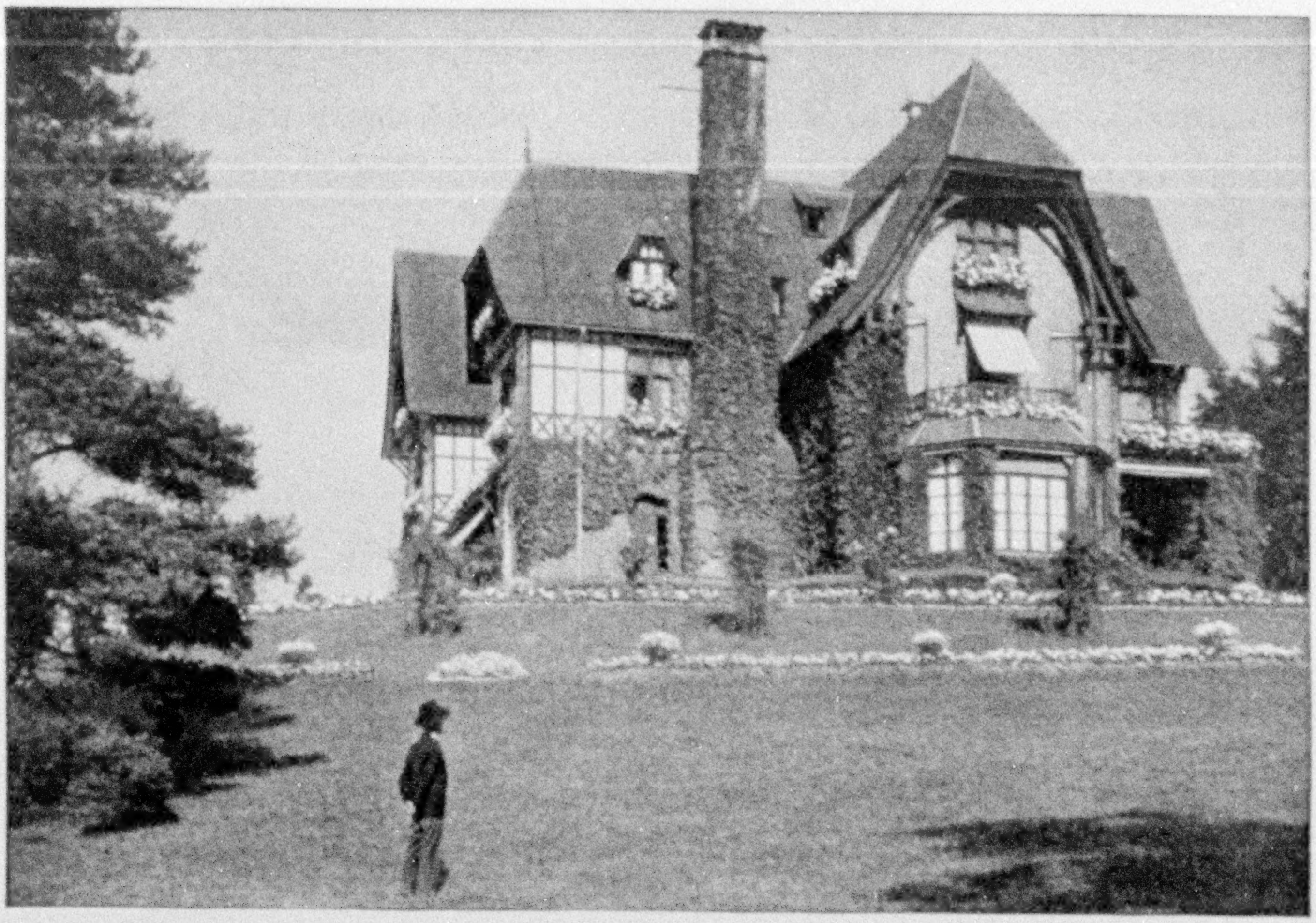
Wherever there is a crowd, these traveling street salesmen are to be found playing and singing popular airs and selling copies of the music at one or two francs each. The picture was taken on Place de la Constitution, opposite Gare du Midi, in Brussels.



Autochromes by Paul G. Guillumette

A STATUETTE WITH EIGHT SUITS OF CLOTHES

The bronze Manikin Fountain is called "the oldest citizen" of Brussels. He won a decoration and an embroidered coat from Louis XV, wore the red cap of liberty during the Revolution, received a chamberlain's key from Napoleon, and now affects the Belgian Guard uniform.



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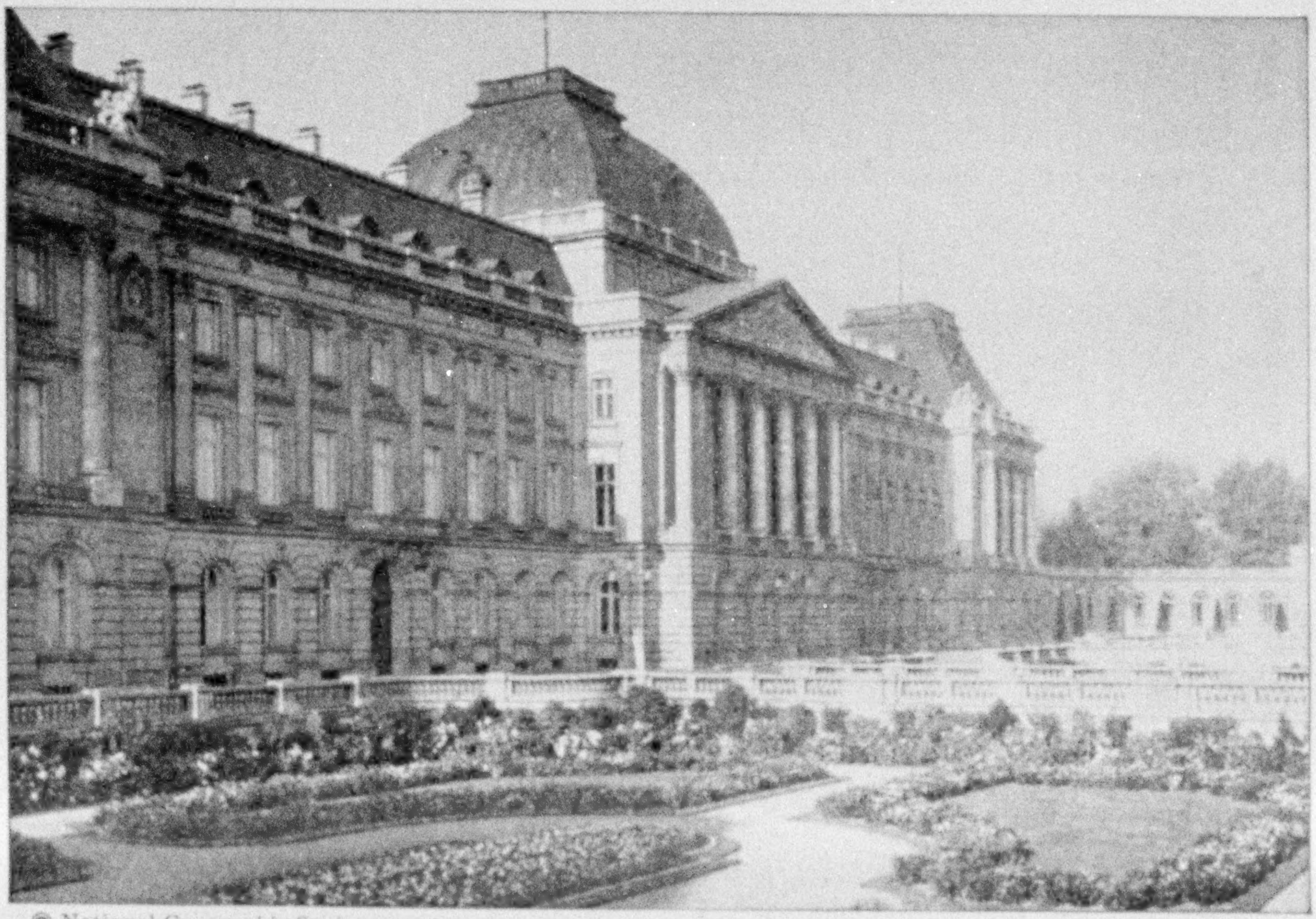
WILHELM II LIVED HERE DURING THE LATTER PART OF THE WORLD WAR

Villa Neubois, near Spa, famous watering place of Belgium, was headquarters for the Kaiser for a time. It was from here that he fled into Holland on November 8, 1918, after the fateful interview with Von Hindenburg. Close to the house his private dugout for air raids is still intact and is shown to visitors.



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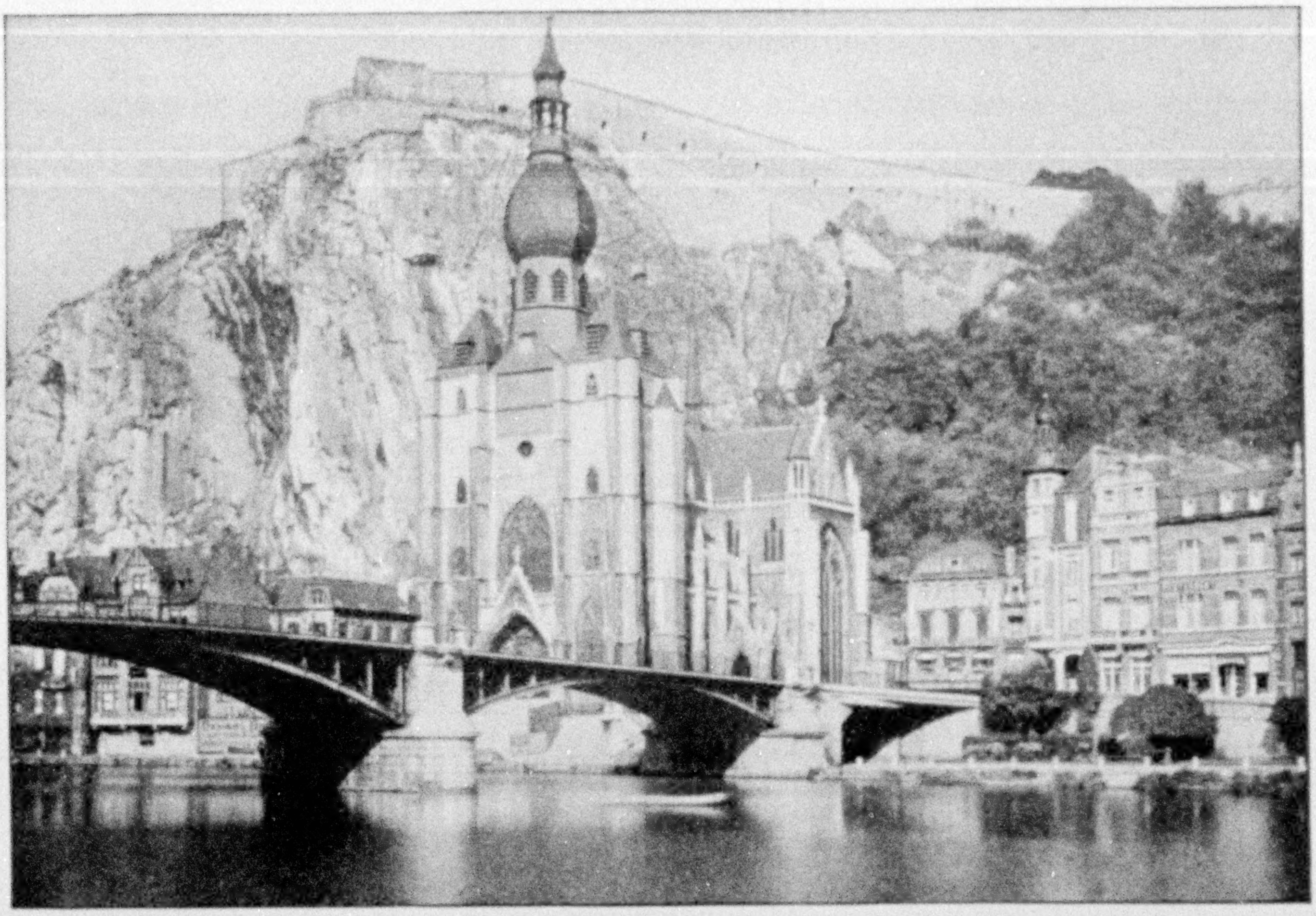
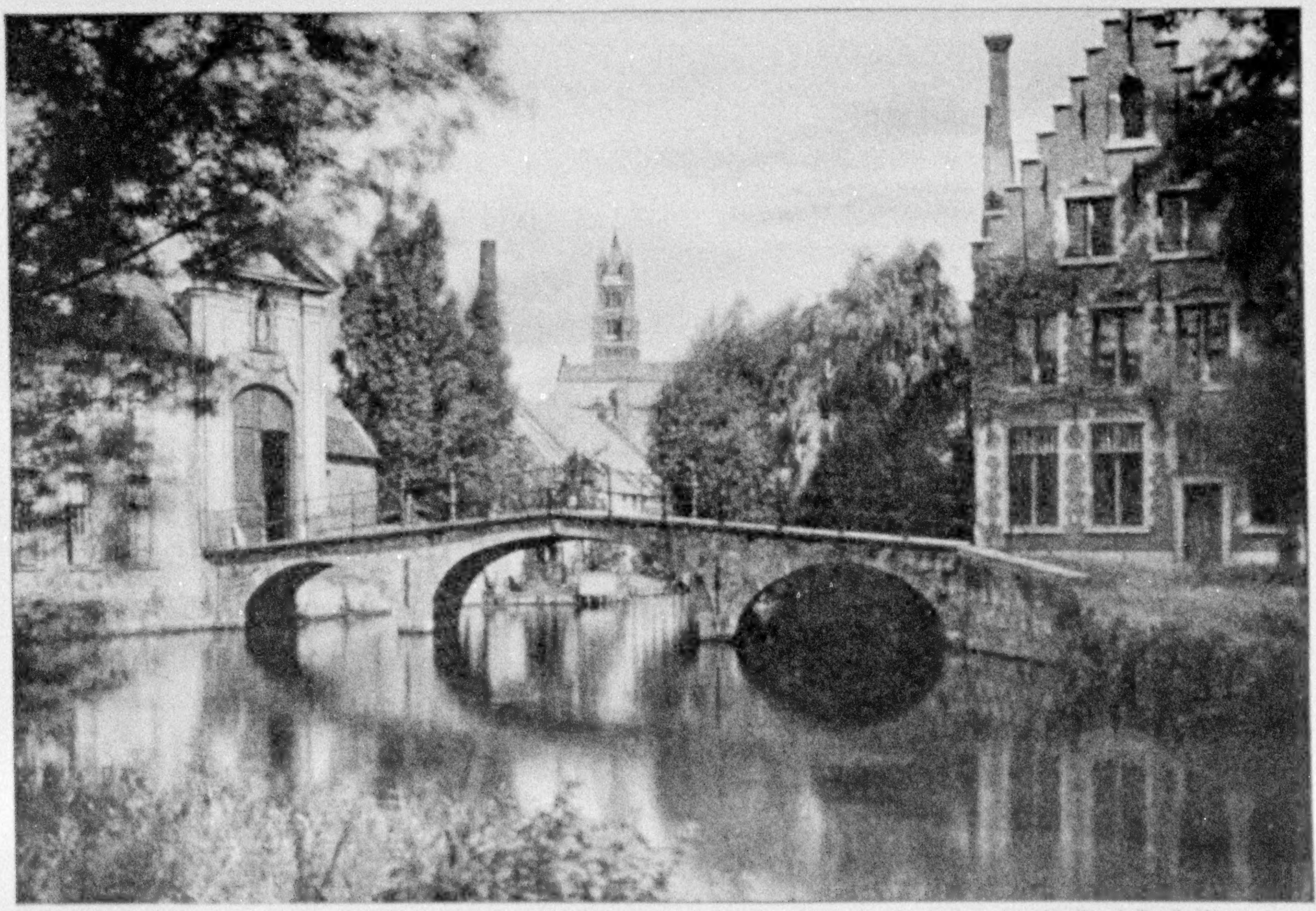
KING ALBERT'S HOME IN BRUSSELS

The massive Palais du Roi, dating from 1740 to 1827, was completely transformed in 1904-12. The interior, open to visitors in the absence of the royal family, is therefore somewhat lacking in historic interest.



DINANT'S COLLEGIATE CHURCH AND CITADEL WEATHERED WAR ATTACKS

Von Hausen, with his Saxon army, planted a flag on this fortified rock on August 15, 1914, but was repulsed, and it was six days later when he crossed the Meuse. Notre Dame, a 13th century Gothic edifice in gray stone and black marble, with its bulbous baroque spire, escaped serious damage.



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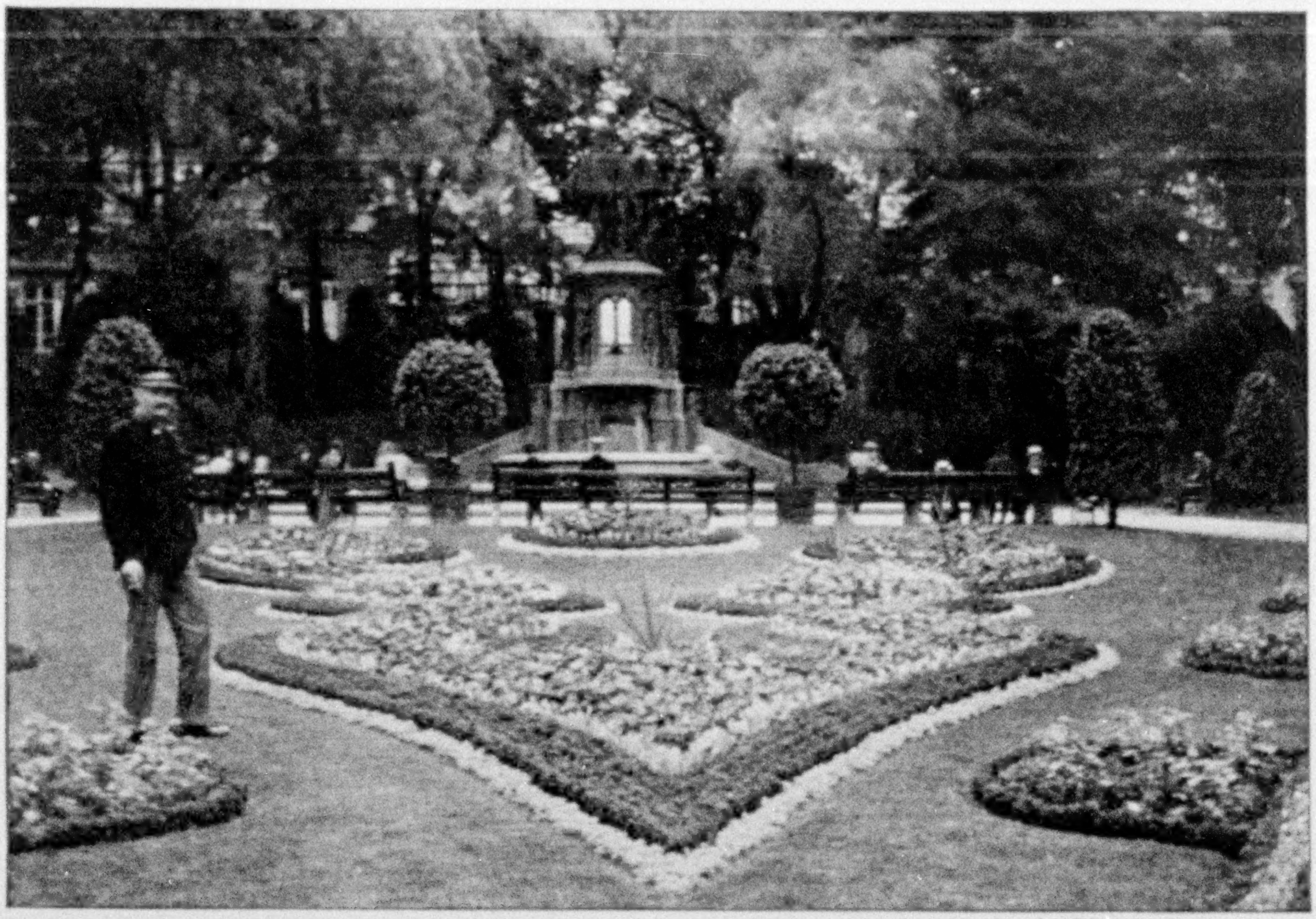
BRUGES, THOUGH CALLED "THE DEAD," LIVES IN ROMANCE

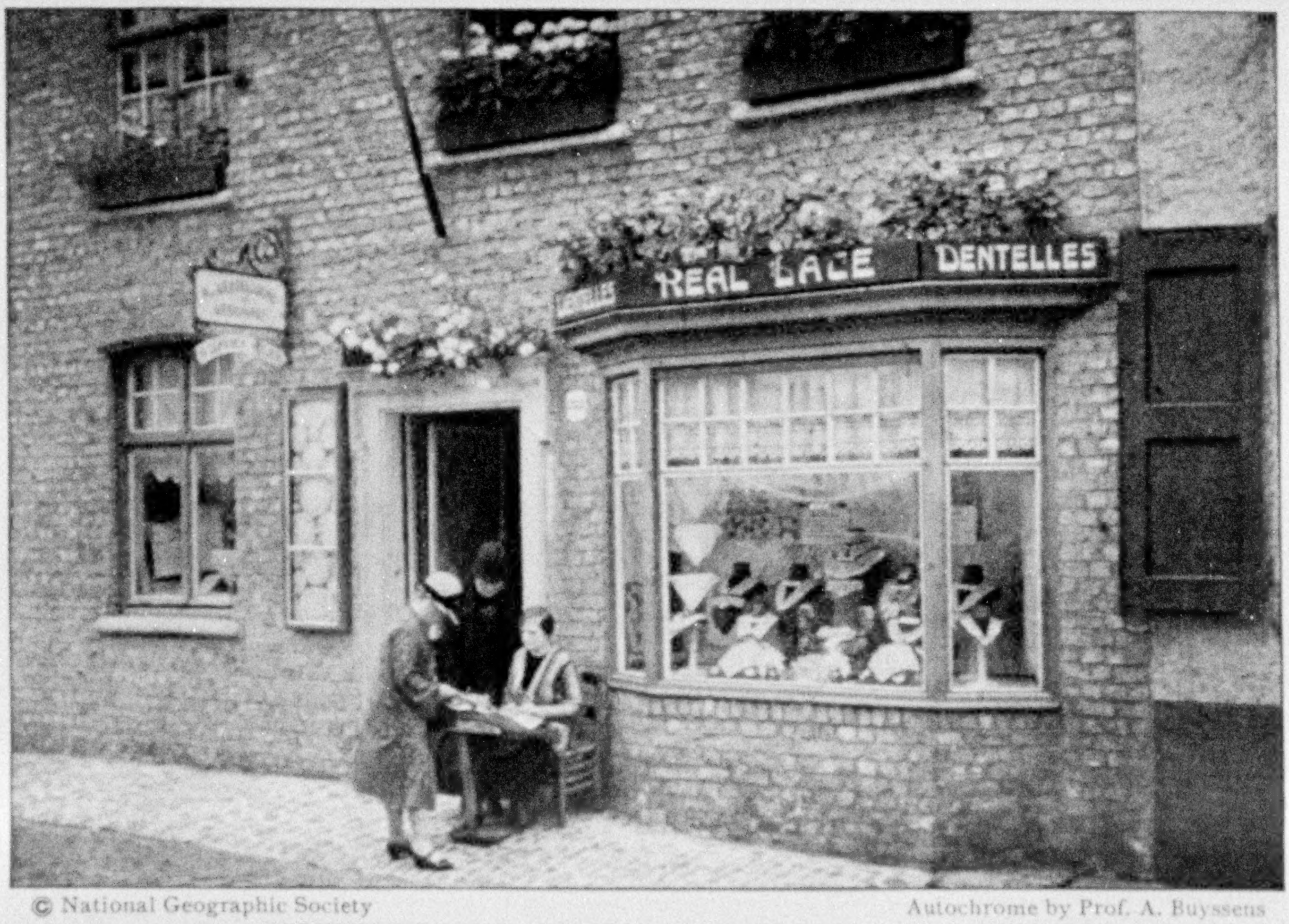
Looking along a placid canal spanned by one of the ancient bridges from which the city derived its name, the visitor sees at the left the entrance to the Béguinage Ste. Élisabeth, a medieval charitable association.



Autochrome by Paul G. Guillumette

EXQUISITE FLOWER BEDS BRIGHTEN THE PLACE DU PETIT SABLON

One of the loveliest nooks in Brussels is this resting place by the fountain memorial to the Counts Egmont and Horn, Belgian heroes, executed in 1588 by order of the Duke of Alva for revolt against Spanish oppression.



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BRUGES OF SONG AND STORY IS FAMOUS FOR ITS LACE

An artist's dream is this quaint old city with its winding streets and delightful shops where priceless bits of needle-point and other products of the Belgian woman's skill are on display in the windows. Fortunately modern progress has failed to spoil its romantic glamour.

OXFORD, MOTHER OF ANGLO-SAXON LEARNING

By E. John Long

"TAXI!"

This greeting, as I emerged from the Great Western Railway Station at Oxford, had a familiar ring; yet, on second thought, it sounded a bit strange, as it might have, for instance, in some obscure Italian hill town or in some inland Chinese city. "Cab, sir," it occurred to me, had been the only station salutation I had heard in England since I had been tendered ashore at Plymouth, a few weeks previously. And the panorama of spires I had just seen from the railway carriage window had settled me into a local, an Old English, so to speak, state of mind. The rest of the world had seemed far away—and then this echo of Times Square!

But the unfamiliar, un-English "Taxi!" was merely the modern Oxford cab driver's way of informing me that I had been recognized as an American, and that modern Oxford town is quite wide awake, thank you, and up and coming, sir, and, by your leave, ready to do your bidding.

"A round of the town, sir, and all the 'igh spots, sir, for ten bob—that is to say, sir, ten shillin's"—the cabby suggested, swinging open the cab door with a flourish. But I resisted the temptation to hear the quaint store of fancy and misinformation for which these unofficial guides are noted and gave him the address of the Wellington Square boarding house recommended to me in London at the American University Union.

THE AUTHOR BECOMES AN UNDERGRADUATE

As the honking cab threaded its way through the motors and bicycles of Hythe Bridge, Worcester Street, and Beaumont Street, passing now a new garage, now a group of medieval college buildings, now a mid-Victorian "private hotel," it occurred to me that this taxicab driver had unwittingly given me a key whereby I might reach a better understanding of this city of unexpected contrasts and charming inconsistencies; this Oxford, where medievalism and modernism are so inextricably mixed.

I had come to Oxford to do research work in English and in history for a book I intended to write. I must also confess that my choice of Oxford was the gratification of an ambition of several years to attend some of the lectures delivered by Oxford professors whose fame had reached across the Atlantic.

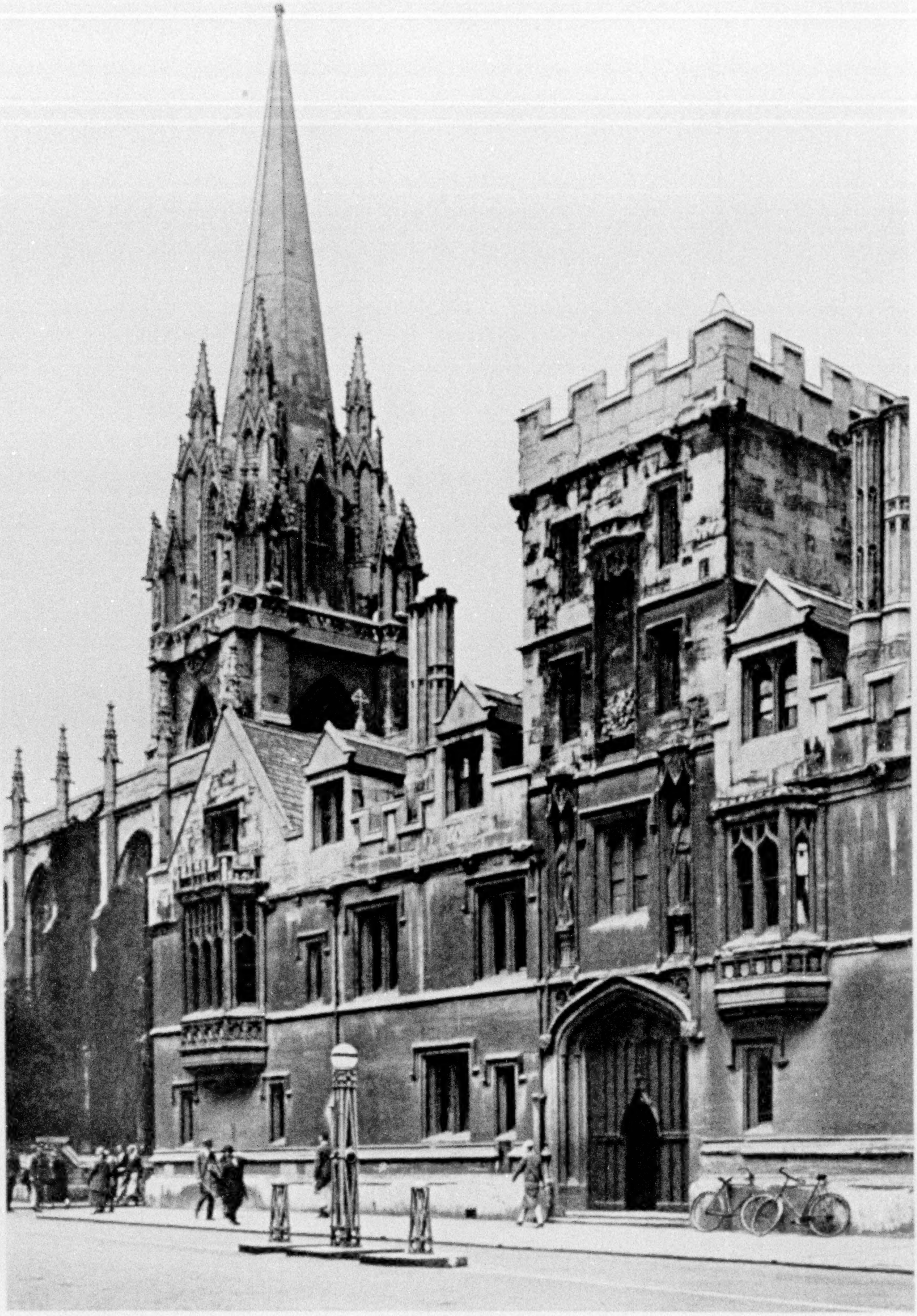
At the American University Union in London I was advised that the best way to obtain the full resources of the university was to apply for membership as an undergraduate. I would thus be subjected to the discipline of the university as an undergraduate, but I would be free from the necessity and embarrassment of obtaining special permits and from establishing my status as a free-lance student.

I was told that all the colleges were full for the term, but that I might be admitted as a member of the Delegacy of Non-Collegiate Students, an Oxford group not associated with any college foundation, but one whose members are entitled to the same general privileges and subject to the same discipline.

Armed with letters of introduction and a copy of my grades at Columbia University, I called at the Delegacy of Non-Collegiate Students, and, after explaining my purpose in coming to Oxford, I was told to report in the library of the Delegacy, a few days later, in cap and gown, which I must purchase. I was further advised to wear a dark suit, black preferred, and a white necktie and bow collar. This, I was informed, is "subfusc," the official uniform for all formal university occasions, such as matriculation, graduation, or calls upon the chancellor or the proctors.

A "BEHAVE YOURSELVES" ADDRESS IN LATIN

When I, and the others who had been accepted for admission, had assembled in the library at the appointed time the Censor, as the dean of Non-Collegiate Students is termed at Oxford, made a short speech. He said we would presently march in a body to the Divinity School, where the vice chancellor would receive us into the university.



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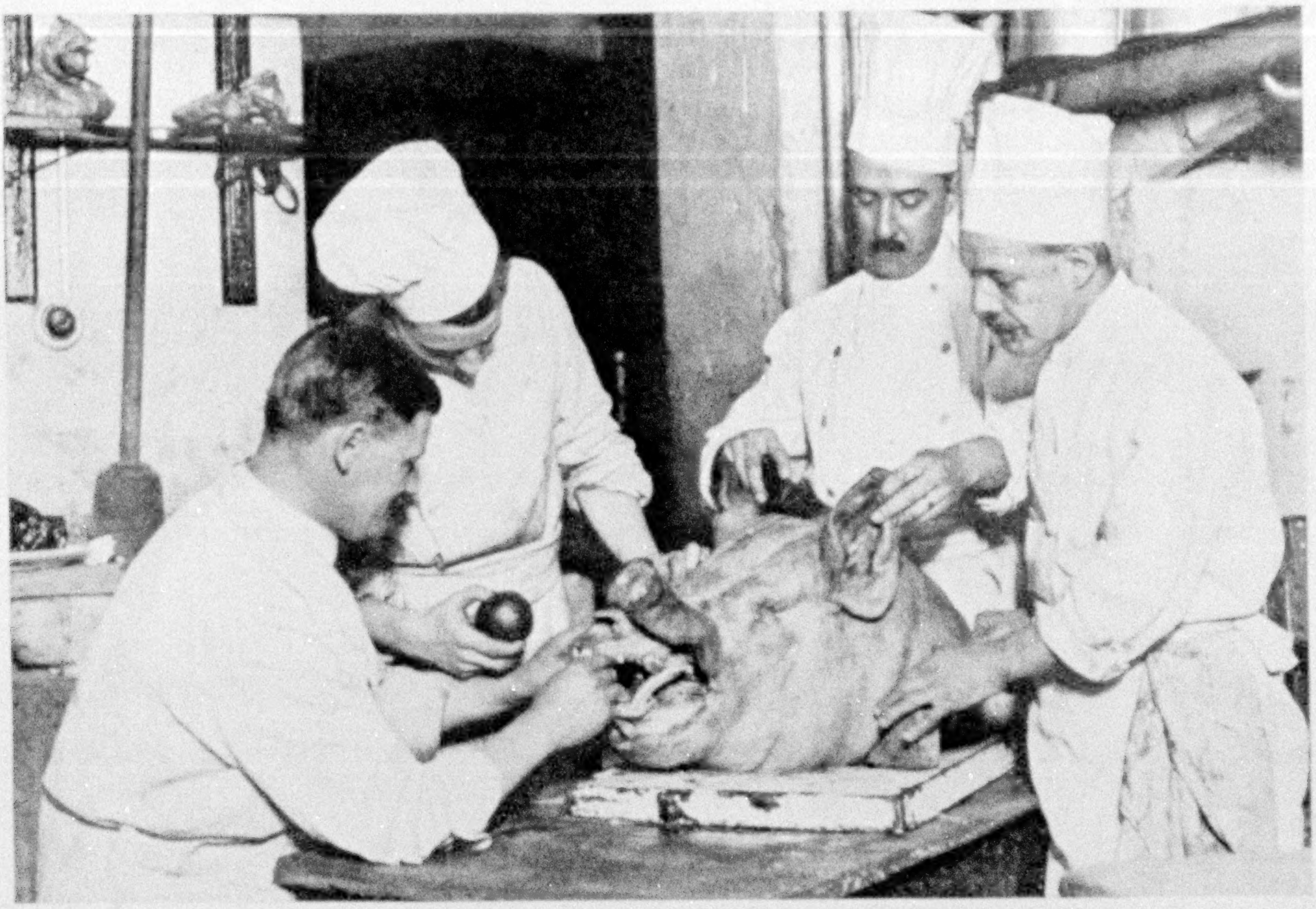
ST. MARY'S SPIRE RISES BEYOND THE MAIN FRONT OF ALL SOULS COLLEGE

History and the law are subjects of special emphasis at All Souls. The college is well endowed and is devoted almost entirely to graduate and research work (see, also, illustrations, pages 580 and 585).



© Oxford Journal

PREPARING THE BOAR'S HEAD FOR THE CHRISTMAS FEAST AT QUEEN'S COLLEGE

To the accompaniment of a quaint English and Latin carol, a boar's head on a huge silver platter is carried from the kitchen to the High Table, where heads of the college sit. This annual occasion is reputed to commemorate the valorous achievement of one of the early students. According to legend, the student, while walking in the forest and reading Aristotle, was suddenly attacked by a wild boar. Undaunted, he thrust his book into the animal's mouth and effectively "choked off" his adversary by this practical application of the arguments of the Stagirite.

"The vice chancellor will make a short address in Latin," the Censor explained, "the substance of which will be 'behave yourselves,' and to which you need make no reply. When your names are called, come forward and he will present each of you with a certificate of matriculation. From this time you are members of the university and subject to its regulations and discipline."

The Censor returned to his study, but in a few minutes he came out again, wearing the scarlet hood over his gown, which signified that he possessed the degree of Master of Arts of the university. We followed him, a small parade of undergraduates and instructors, along several streets and across several courts, to an ancient stone building adjoining a large paved quadrangle. We entered a long hall with seats like pews on each side and overhung with a magnificent arched roof of delicate stone tracery. Groups of scholars and instructors from other colleges were already there.

We had not long to wait. Despite its air of medieval repose, Oxford conducts its affairs with precision and, considering some of its antiquated systems, with surprising efficiency.

The vice chancellor, in a resplendent scarlet robe and cap with gold tassel, entered the room, preceded by two beadles in black cap and gown. The office of bedel is "an ancient and honorable one." Formerly they were appointed to punish petty offenders, but their duties now are chiefly processional. On all formal university occasions the bedels precede the vice chancellor, bearing their staves, three gold and one silver.

After the vice chancellor had delivered his admonition-benediction, our names were called in Latin by one of the assistants, and we stepped forward in turn to receive a small paper scroll and a bound copy of the university regulations from the hand of the vice chancellor. It was quickly done. He did not look up as he issued mine. My scroll read:

> Oxoniae, Termino Michaelis A. D. 1926.
> Die XIX, Mensis Oct.
>
> Quo die comparuit coram me Edwardus Joannes Long, Schol. non Ascript. et admonitus est de observandis Statutis hujus Universitatis, et in Matriculam Universitatis relatus est.
>
> Francis W. Pember, (signed)
> *Vice-Cancellarius.*

It was a simple ceremony, but most impressive. It gave the effect of a contract entered into, both parties assuming duties and obligations; yet, at the same time, the elements of the dramatic took away the sharpness associated with contracts. I felt that I had been properly initiated into some order of learning, some mystic cult of pansophy whose age-old secrets were now about to be revealed to me. It was so much more effective than visiting a bursar's office and paying fees, although this rite, too, had to be performed in due time at Oxford!

THE PRIVILEGES OF A UNIVERSITY STUDENT

I was now a member of the university. I could attend lectures without the payment of extra fees and use without question the great wellheads of information the university afforded.

Several days remained before lectures would start and, with so much new and interesting on every hand, I decided that research work, too, could wait. The spirit of Ulysses is said to be foreign to the true Oxonian, but I wanted to know this place in which I was to live and work for the next few months. I spent most of the daylight hours browsing from college to college and most of the evenings reading about the Oxford that has been.

For Oxford is a picture of the Middle Ages, whose spirit speaks of to-morrow, and is a fascinating study in itself. "A home of lost causes and impossible loyalties," it has been labeled by some writers. Perhaps libeled is a better word. "Lost causes" and "impossible loyalties" suggest defeat and decay. But Oxford apparently has been nourished by lost causes; it has thrived on, or prospered in spite of, impossible loyalties (see, also, page 595).

The spires of the good gray city look down upon us restless ones of a machine age with the same detachment and indifference that they displayed in the face of Cromwell and his Roundheads or any others who have threatened their monastic peace and calm.

There are, of course, those who say that Oxford is very far from being a home of lost causes, and that, on the contrary, it has always been quick to fall in line with every popular fad which various generations have developed. But this is a matter of opinion.

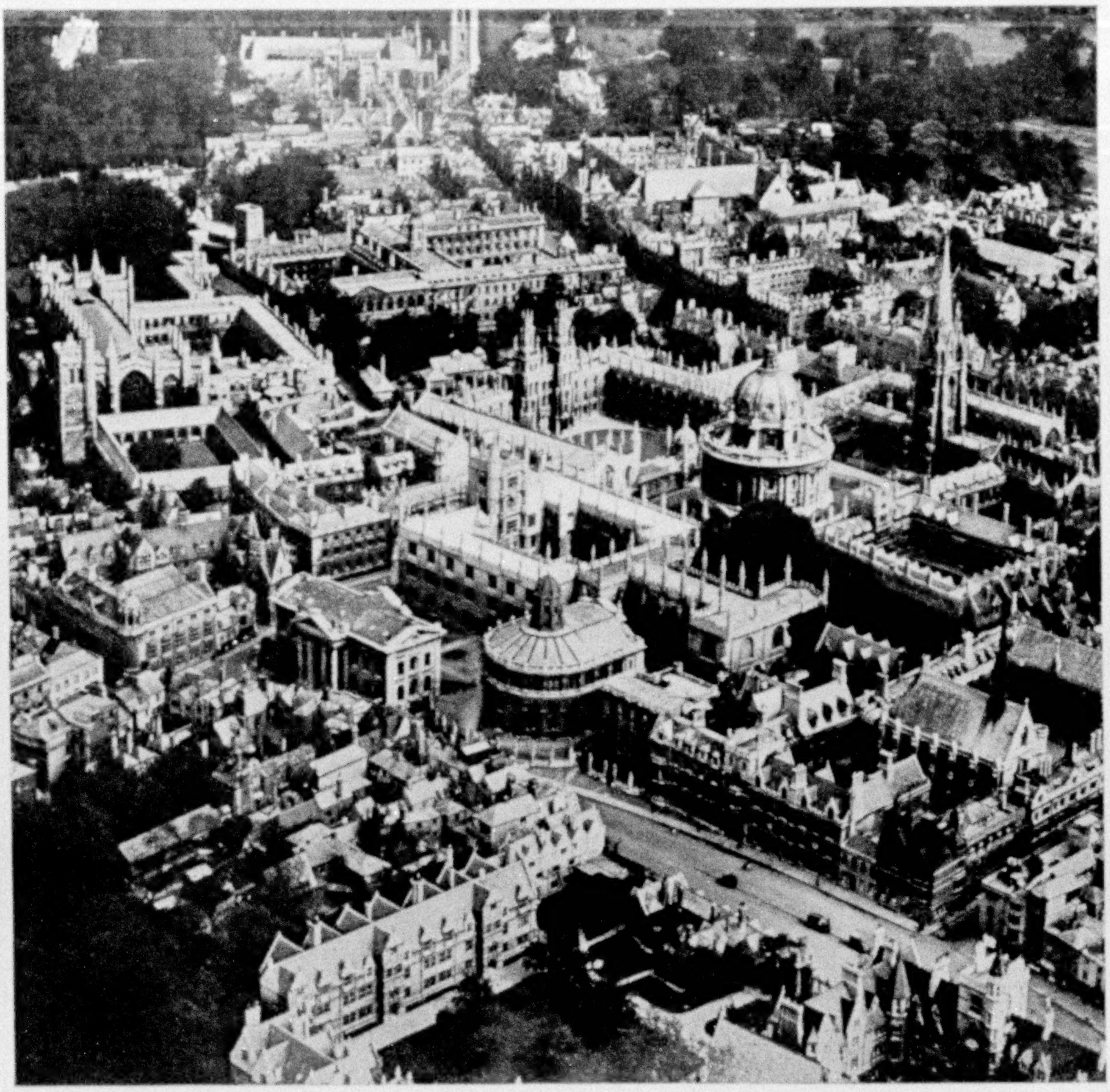
News that a great automobile factory at Cowley village, on the outskirts of Oxford, is likely to convert the venerable seat of learning into a second Detroit is met in Oxford with mild surprise and a puzzled frown.

"Just where is Cowley," the typical Oxonian will ask, although he may know well enough its disreputable and formerly popular motion-picture house, and the Morris automobile factory there, largest in Britain. "And what can an automobile factory hope to produce which can rival these?" indicating a row of beautifully illuminated manuscripts in that treasure storehouse of the mind, the Bodleian Library. Nevertheless, an Oxford Preservation Trust has recently been organized to assure the manuscripts at least an even break if "progress" should get the upper hand.

CONCESSIONS TO PROGRESS

Strolling along the winding streets and lanes of Oxford town, I noticed many things in the windows and signs of the shops which indicate that the tradesmen and others not directly connected with the university have made concessions to the times—chain stores, called "3 and 6's" instead of "5 and 10's," the units being pennies. There is a branch of the well-known Woolworth's in Oxford; American movie houses, "cinema" is the English word, showing American and foreign films; interurban bus lines, garages and parking spaces, soda fountains, and novelty shops.

Although every vista is closed with a spire or tower, a polite and efficient traffic policeman will admonish you to "come along" (move), if you linger too long at



Photograph from "Topical" © Aërofilms

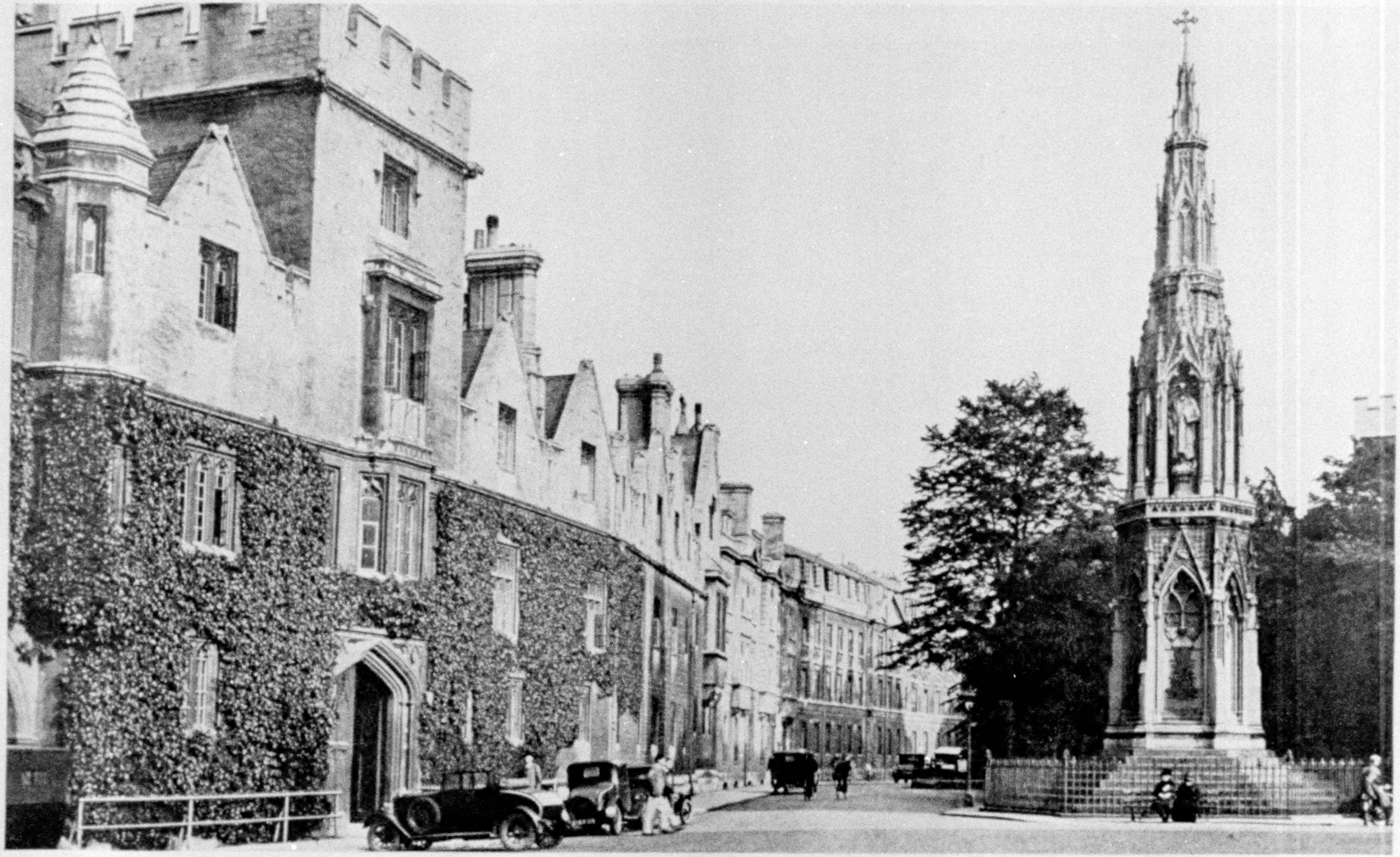
AN AIR VIEW OF THE MOTHER OF ANGLO-SAXON LEARNING

In the center is the Divinity School, flanked on the right by the dome of Radcliffe Camera and the Spire of St. Mary the Virgin and on the left by the columned Clarendon Building. The Brasenose quadrangles are to the right and below the Camera, while the cross-shaped Bodleian Library and cupola-topped Sheldonian Theater are prominent in the middle foreground, with the buildings of Exeter College abutting the latter. In the middle distance are the twin towers of All Souls, with Hertford and New Colleges to their left, Queen's just beyond, and University to the right (across High Street). Magdalen's incomparable tower rises above the college buildings, at the top of the picture. In the lower left are parts of Trinity and Balliol.

crossings to drink in the beauty and charm of the scene before you.

But all this is Oxford town, which for generations has washed like a sea against the bulwark of walls, towers, and battlements known as the colleges of Oxford University. Within their great iron-studded gates the noise, the ephemeral comings and goings, the ordinary pleasures and triumphs and disappointments of the workaday world fade away.

These quiet quadrangles, with their emerald carpets of velvety grass and bordering rows of brilliant flowers, belong, I felt, to the ages. Their leaded glass windows, looking down from ivy-clad towers and walls whose edges have been softened in kindly decay, reveal glimpses of cozy dens which have listened to the wit and wisdom, the folly and roguery, the hopes and illusions, of seven centuries of a nation's finest manhood.



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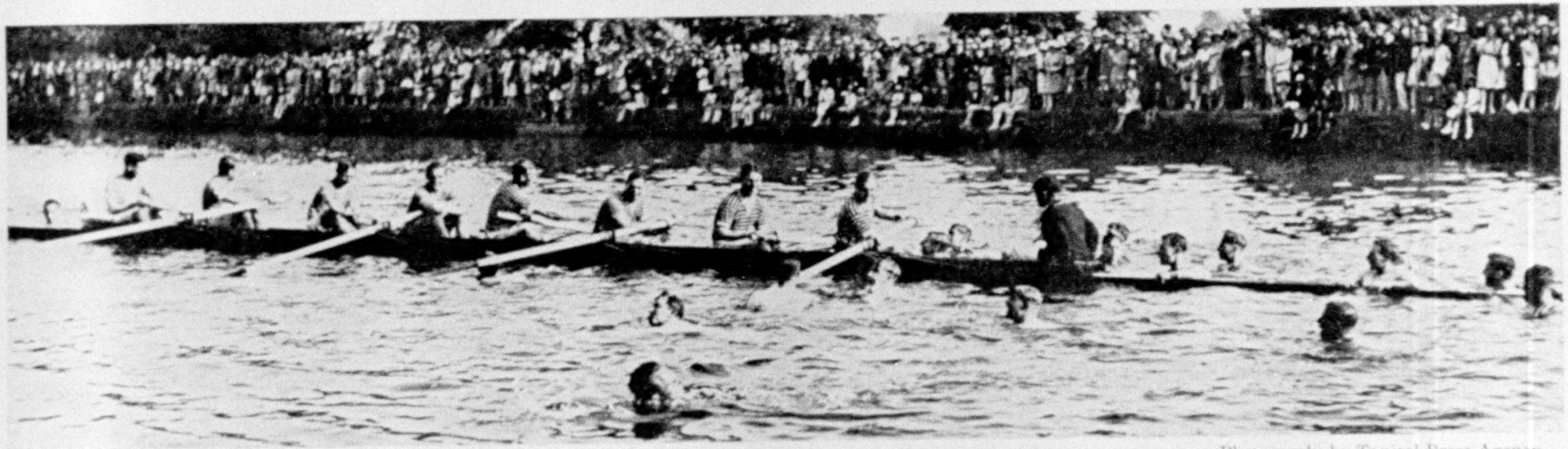
A MONUMENT TO MARTYRED CHURCHMEN FACES BALLIOL COLLEGE

At Oxford, Ridley, Latimer, and Cranmer were tried for heresy and put to the stake in the middle of the 16th century. Their memorial was erected opposite the west front of Balliol College in 1841 and was designed by Sir Gilbert Scott after the beautiful crosses which the first Edward raised to the memory of Queen Eleanor. Balliol College was founded in 1265 by that John Baliol whose son was for a short time King of Scotland.

OXFORD UNDERGRADUATES ENGAGED IN A FAST GAME OF HOCKEY



Photographs by Topical Press Agency

JUBILANT SUPPORTERS OF A BRASENOSE CREW GO INTO THE RIVER TO WELCOME THEIR VICTORIOUS EIGHT

In general, Englishmen are not supposed to become greatly excited about their sports, but rowing races offer an exception to the rule. In the heat of a contest on the river all reserve is cast aside.

Photograph from E. John Long

SCORING A "BUMP" IN A "TORPID" RACE ON THE ISIS

To bump the boat in front, and thereby advance one place on the river, is the object of each college shell. The "Torpid" races are preliminary to those of Eights Week and are rowed in heavier boats with fixed seats (see text, page 595).

Here, one feels sure, is no shell of a dead civilization, but rather the rich fruit of ripe old age; a maturity secure against whatever may come or go in the world outside, be it near or far from the gates.

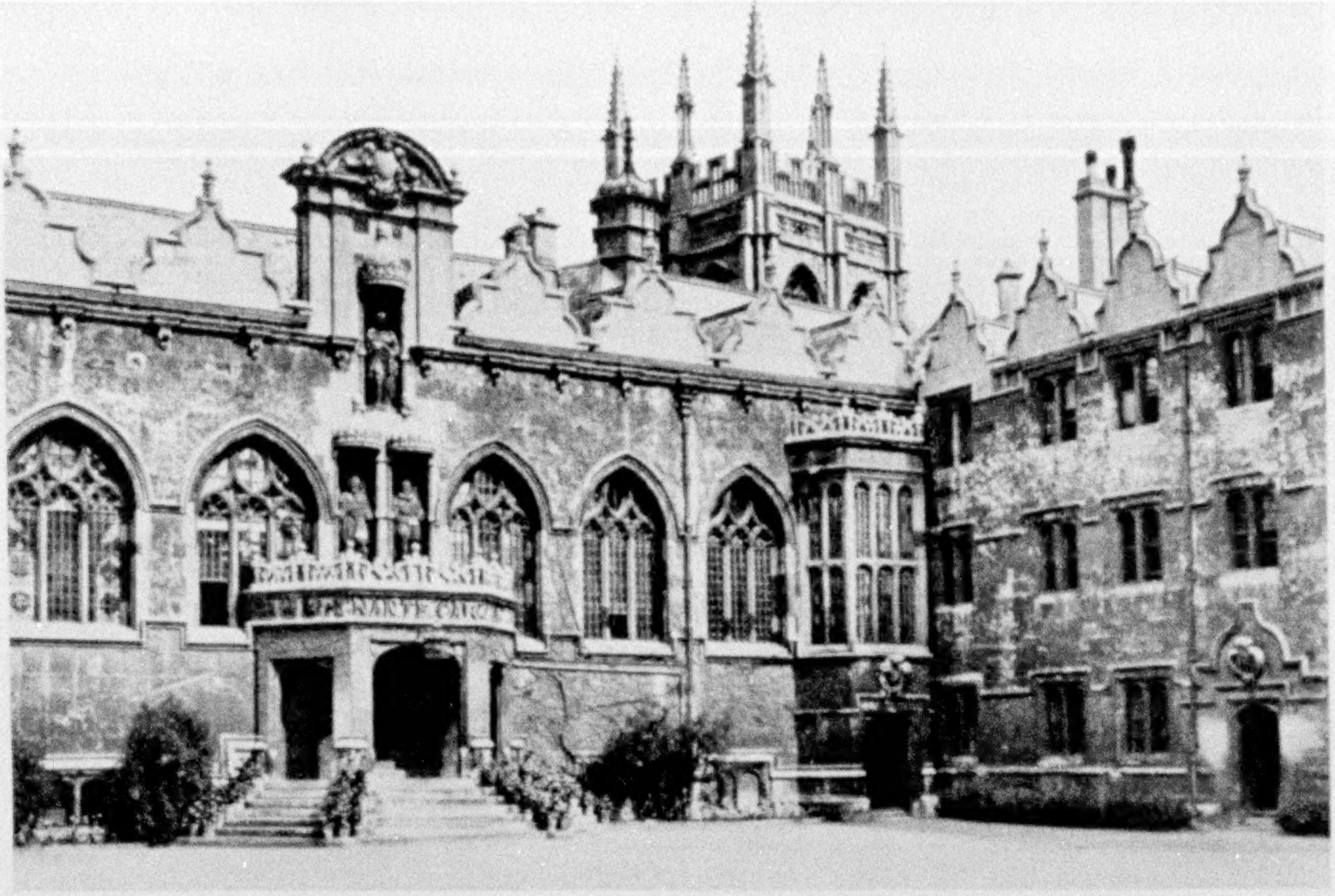
THE ORIGIN OF THE UNIVERSITY IS SHROUDED IN MYTH

The origin of Oxford as a university is shrouded in the misty myths of a day when records were poorly kept and even more poorly preserved. Some authorities hold that Oxford and Cambridge were each founded by early potentates. Others claim that religious establishments in the towns attracted scholars.

It seems more likely, however, that both Oxford and Cambridge became universities as a result of location and a series of fortunate circumstances. Halfway between London and the Midlands of England, on main routes connecting the two populous districts, yet far enough removed from the disturbances of these industrial and political centers, teachers and scholars alike found in them havens for academic life. A few learned men gathered about them, in their homes or in monastic buildings, groups of students, who found such accommodations as they could in halls or hostels about the town.

In course of time the scholars and teachers, as a matter of convenience, boarded together in halls. Gradually these halls gave way to corporate bodies or colleges, most of them of religious foundation and endowment. Expulsion of foreign students from Paris in the 12th century proved a great impetus to the struggling little English groups, and we find, a century later, that Oxford has 3,000 students, and that Cambridge is recognized, in a writ of Henry III, as "an important seat of learning."

To-day Oxford is officially composed of 21 colleges, one hall, a Delegacy of Non-Collegiate Students, four "societies" or colleges of women students, and the Society of Oxford Home Students, the last the female equivalent of the Delegacy of Non-Collegiate Students. In all, there are some 15,000 undergraduate and grad-



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SIR WALTER RALEIGH CLAIMED ORIEL AS HIS ALMA MATER

This college was founded by Edward II in 1326, but the present buildings are of much later date. Over the hexagonal portico are statues of the founder and of Charles I, while in a niche above them is one of the Virgin and Child.

uate members of the university, of which from 4,000 to 5,000 are undergraduates in residence.

THE UNIVERSITY ELECTS TWO MEMBERS OF PARLIAMENT

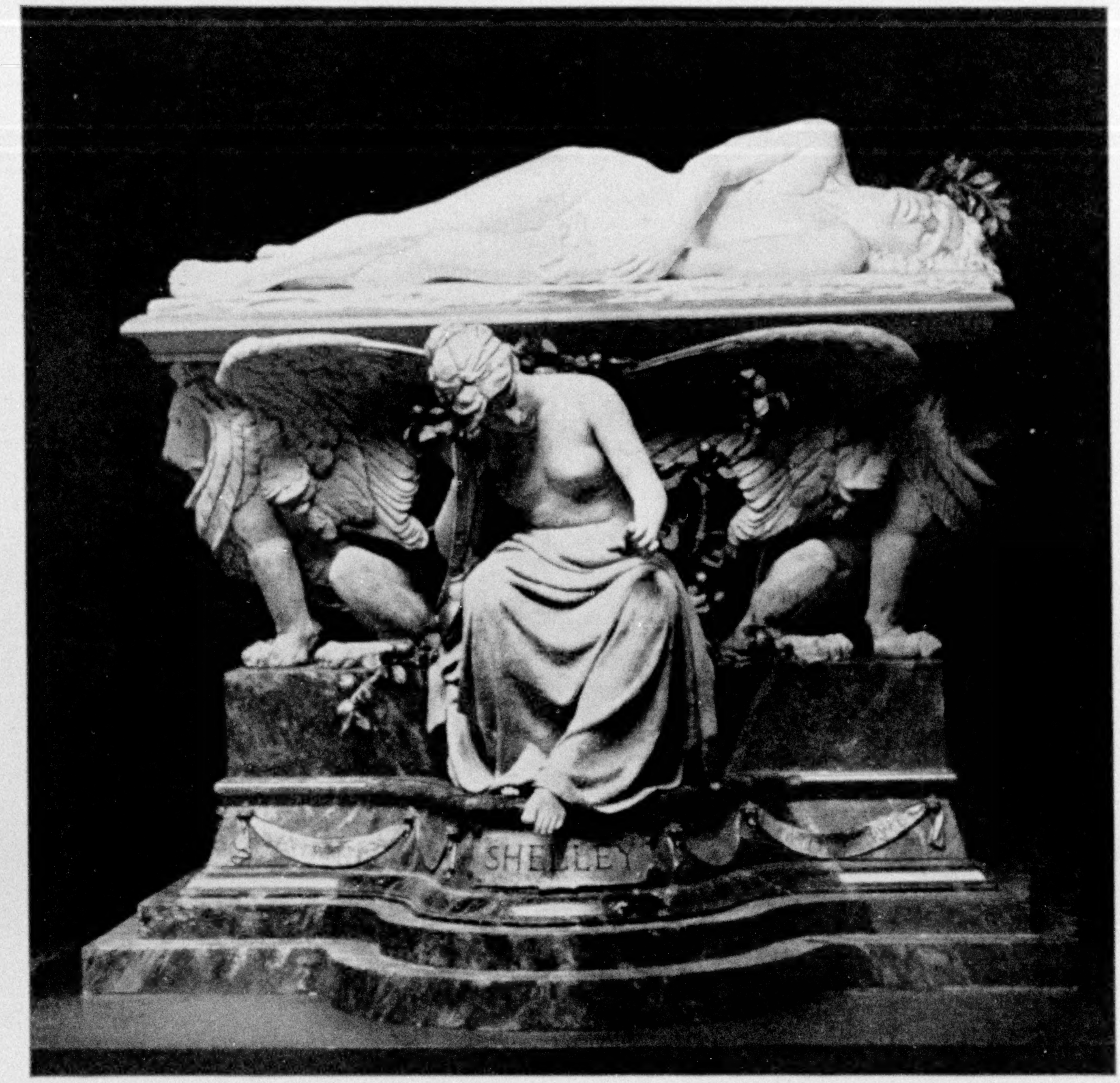
Graduates may continue to be "members" of the university by the annual payment of certain fees. This membership carries with it both academic and political rights. If the graduate has a degree of Master of Arts or higher, he may vote on all proposed university legislation, and, if he is also a British subject, he may take part in the election of the two members of Parliament to which the university, as distinct from the town and county of Oxford, is entitled.

Oxford and Cambridge are unique among institutions of higher learning in the world in that they are composed of colleges which are also incorporated bodies, each college with independent endowments, the right to receive and reject whom it will, and the power to regulate its students, within the walls of the college itself, as it sees fit. No one, in fact, may be a "member" of the university unless he is first accepted by one of the colleges or the "societies" of which the university is composed. There are no members of the university "at large."

The university regulates the teaching, prescribes the requirements for degrees and grants them, and enforces discipline outside of the college walls. Almost every other power is delegated to the individual colleges. In some respects the relation between the university and its colleges resembles that between the Federal Government and the State governments of our own country.

When all this had become fairly clear in my mind, I learned that there are many exceptions; that Oxford is replete with what seemed, to my order-loving, pigeonholing, American way of looking at things, strange inconsistencies.

I discovered, too, that the university policed quite rigidly my actions outside of my lecture room or my "diggings," as living quarters in town are called. There



Photograph by Davis

ONE OF THE LIONS OF UNIVERSITY COLLEGE IS THE SHELLEY MEMORIAL

Executed by Onslow Ford and presented by Lady Shelley, this memorial precipitates heated artistic discussions in Oxford. In 1810 the poet had rooms in the college, but was expelled for publishing his pamphlet, "The Necessity of Atheism."

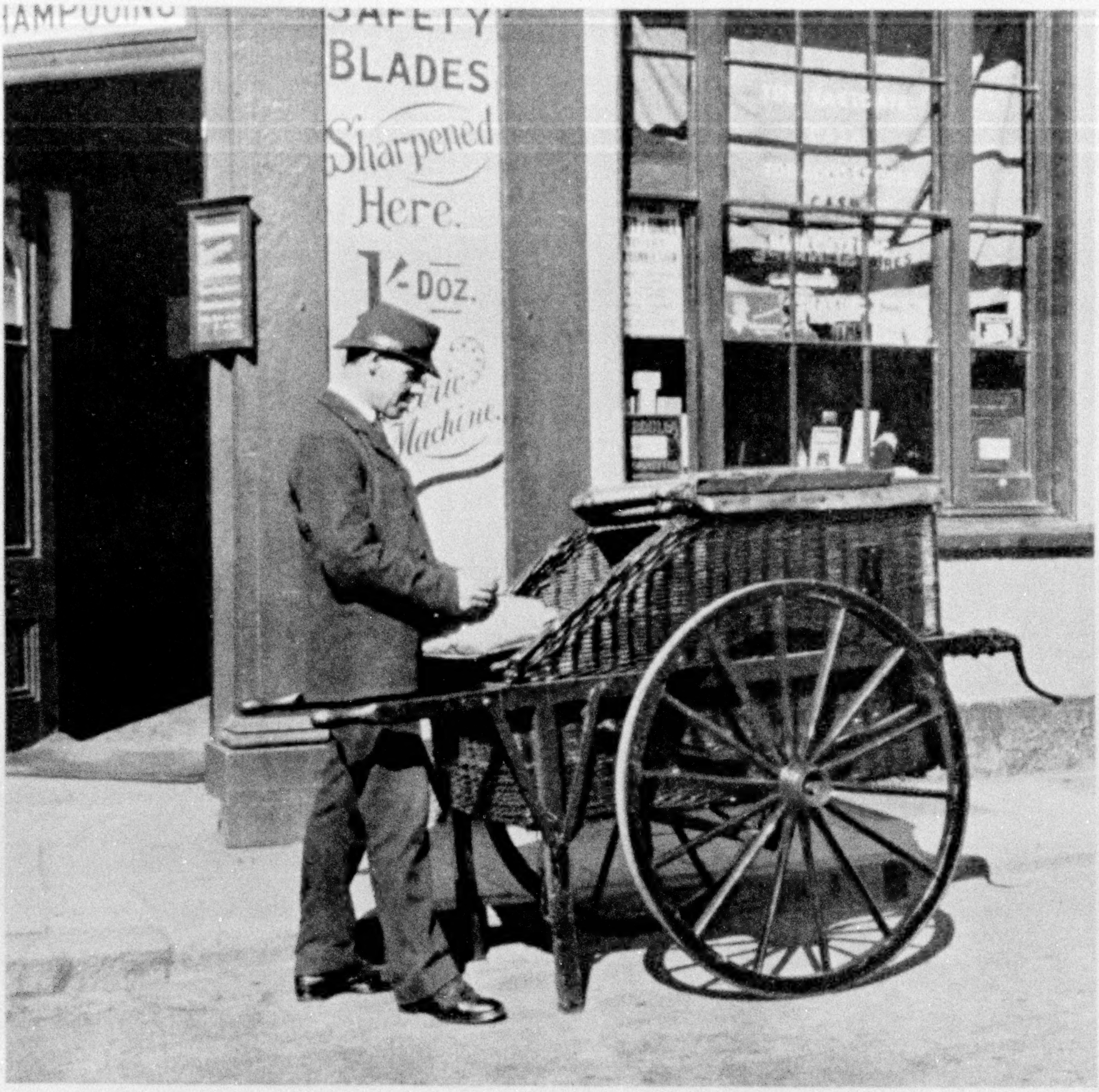
were many places I might not visit. Saloons, or public houses, as they are termed, were tabu, although there was no stated limit to the amount of intoxicant I or any other undergraduate might consume in a college or a lodging or at certain restaurants approved by statute.

"A FREE CITY WHEREIN MEN ARE SLAVES"

This does not mean that drunkenness goes unreproved in Oxford. It does not, but there is some leeway about drinking. Instructors are often present at dinner parties where the cup that cheers passes freely. Ale may be obtained at meals in the college halls.

My relations with the fair sex, I was told, would be subject to careful supervision, more so than at any American university. Undergraduates are sometimes stopped on the street by a university officer, who requests an introduction to their companions, "to make certain that relations are all that could be wished."

Englishmen accept all this as a matter of course, but American students sometimes protest that their constitutional rights are being infringed, forgetting that they are guests in a strange land which has no constitution, in our sense of the word, but which guards the rights of freemen, after its own code, as well as any.


SHAMPOOING
SAFETY BLADES Sharpened Here. 1/- DOZ.
Machine.

Photograph by Clifton Adams

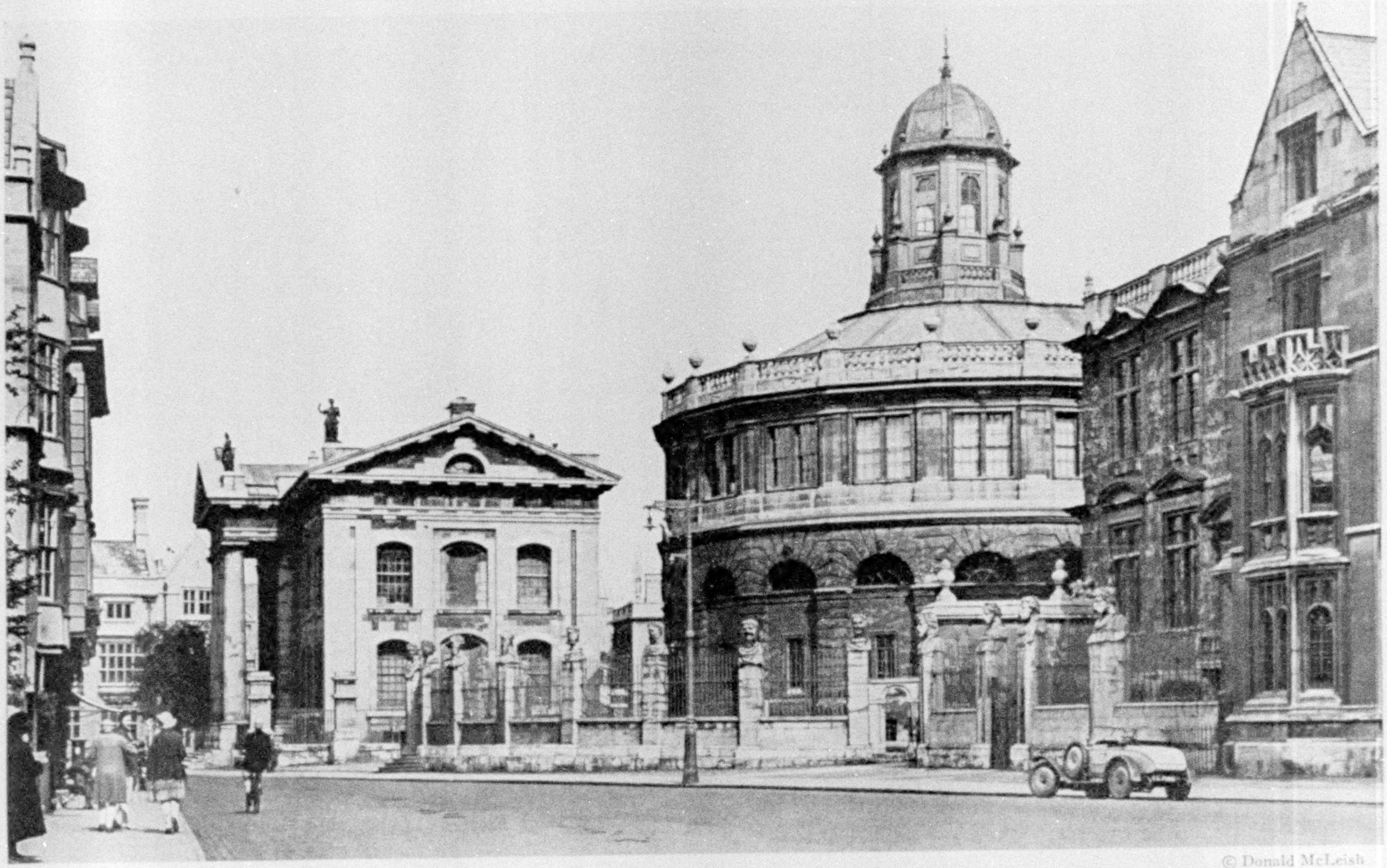
PARCEL POST TRAVELS ABOUT OXFORD IN A RED WICKER PUSHCART

A postman from the local office out on the streets with his parcel-post barrow delivering packages. Almost all the machinery of His Majesty's mail is painted red.

In the copy of Statuta et Decreta, which is presented to him when he is admitted *in statu pupillari* by the vice chancellor, the newcomer will be informed that two proctors, appointed from college faculties, and two servants (popularly known as "bulldogs") are empowered to enforce the rules and regulations of the university throughout the Oxford district. They patrol the streets of the city of Oxford and take the names of undergraduates who may be found in places forbidden in the statutes or those being disorderly or otherwise conducting themselves in a manner "not befitting a member of the university."

One English writer comments facetiously on the system: "In solemn truth it may be said that the Common Law of England, which covers so great a part of the world, even beyond the bounds of the British Empire, does not run in Oxford. Oxford is a free city wherein men are slaves of a chancellorial tyrant."

This is, of course, mere hyperbole. But the vice chancellor, who does the work of the chancellor, an honorary, nonresident officer, may truly be said to be the lord of all he surveys in Oxford. While the city of Oxford has a ruling mayor and corporation (council) and theoretically is independent and supreme outside of



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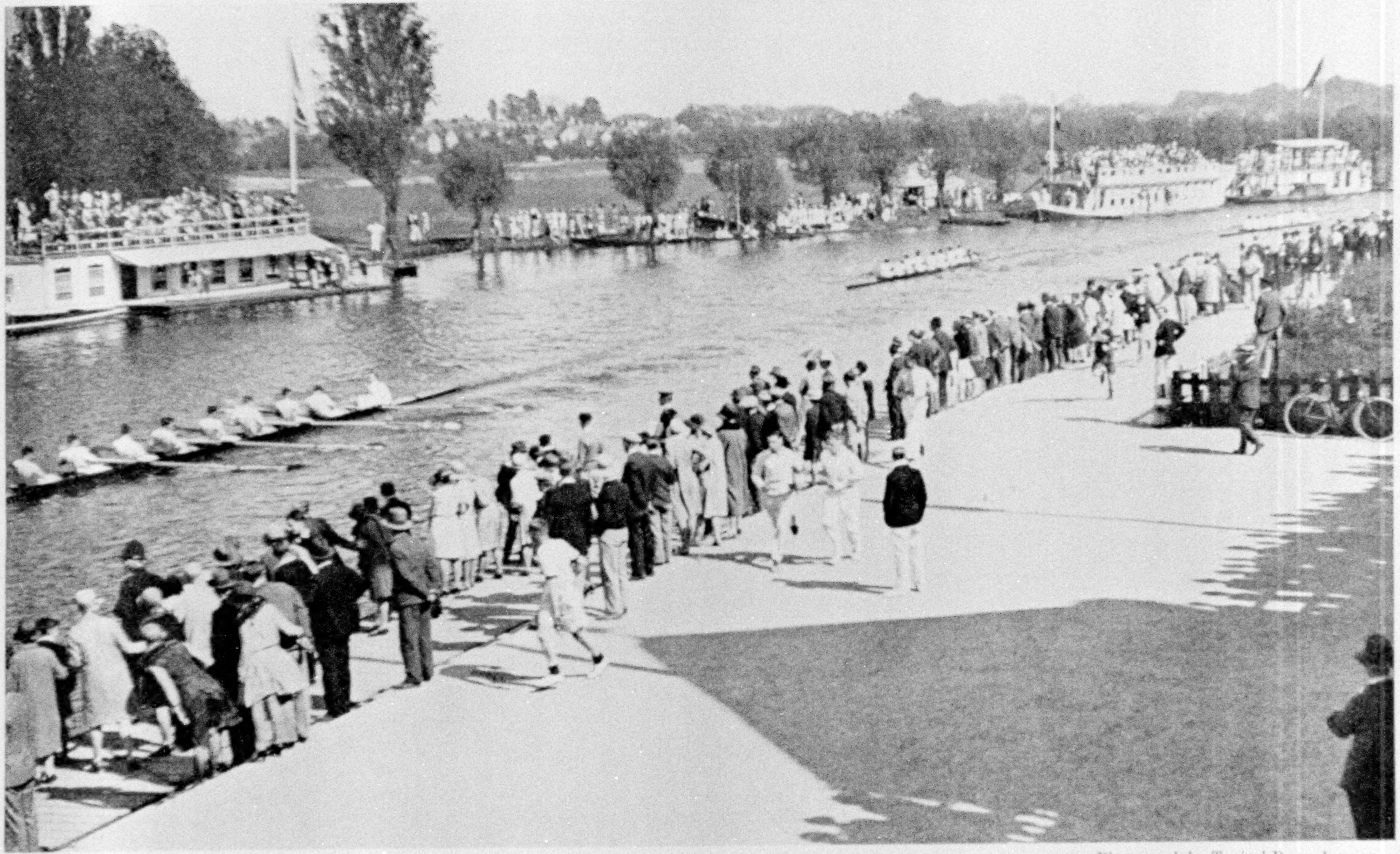
THE CLARENDON BUILDING AND SHELDONIAN THEATER ARE IMPORTANT COGS IN THE UNIVERSITY LIFE

In the former (at the left) are located the offices of many of the university officials. The latter (center) was designed by Sir Christopher Wren and is used for commemoration exercises, when prize poems and essays are read and degrees conferred. At the right a corner of the old Ashmolean Museum shows. In this building the great Oxford Dictionary, or, as it is now called, the "New English Dictionary," was completed (see text, page 588).



Photograph by Topical Press Agency

SUMMER EIGHTS PROVIDE THE CLIMAX FOR SPORTING EVENTS AT OXFORD

Competition in these races is intercollegiate and produces greater enthusiasm than any other event of the school year. To be a member of the college eight is the height of the undergraduate athlete's ambition (see text, page 592).

Photograph by Topical Press Agency

ENGLISH FOOTBALL AFFORDS PLENTY OF ACTION

The game as played at Oxford differs considerably from the American sport. It is a pastime of long standing and ranks with cricket and rowing as one of the most popular British sports. To be a "blue," or first-team man, at "rugger" is almost as great an achievement in the university as to row on a varsity crew.

college walls, it usually gives way when the vice chancellor of the university wishes certain things.

For instance, no dances, benefit entertainments, or other amusements open to the general public and students may be held within the limits of the city of Oxford unless the permission of the vice chancellor has first been obtained. On the advertisements and programs for such entertainments will always be found the significant line: "By permission of the Vice Chancellor and the Rev. the Right Worshipful the Mayor."

Yet there is an exception to this rule of rules. Within the walls of a college the vice chancellor has not an atom of authority. He may only request "Heads of Houses" (the principal of a college is known by various titles: he is Dean at Christ Church; the Master at Balliol, Pembroke, and University Colleges; the Rector at Exeter and Lincoln; the Warden at New; the President at Magdalen; the Censor at the Delegacy of Non-Collegiate Students, etc.) to comply with his wishes, even if an undergraduate within the college walls is wanted at the Chancellor's Court for a misdemeanor.

CAUGHT BY THE PROCTORS

Thus, perhaps, is best illustrated the real significance of the college at Oxford, and thus, in a measure, is explained the bewilderment of the summer tourist who tramps from college to college in search of the university, always so difficult a thing to find at Oxford!

The proctors, as enforcement officers, have a method of their own in apprehending rule-breakers and in dispensing justice. It combines strictness with the utmost tact and courtesy. In the course of my own experience at Oxford I was "progged" (caught by the proctors) for an offense I had not committed, but I am glad the incident occurred, for it revealed most graphically the workings of the university legal system.

With another student I had been walking along Cornmarket Street early in the evening. My friend stepped into a pharmacy and I walked on a short distance, finally stopping to wait for him. I did not notice that I had halted in front of an unlicensed (not listed in the permitted places in the Statuta) dance hall. Just then the proctors, in flowing cap and gown, and the two bulldogs, or "bullers," came up the street (see page 573).

Then was my time to flee, for the hard heels of the bulldogs pounding on the pavement usually give miscreants a very sporting warning and a chance to get away.

But my conscience was clear. I watched the "parade" with some interest, wondering what luckless wretches would be caught "in the toils" that night, when, to my astonishment, the senior proctor stepped up to me.

"Your name and college, sir," he requested, drawing a pad and pencil from his pocket. I should say here that I had been recognized as an undergraduate because I had my gown with me. University regulations require the undergraduate always to have his gown when he appears on the street at night, although he does not have to wear it as long as it is visible; that is to say, he may drape it over his shoulder, or over his arm, or wear it like a scarf around his neck. It must be worn in lecture halls, although mortar boards do not have to be worn either on the streets or in classes.

For a moment I was dumfounded.

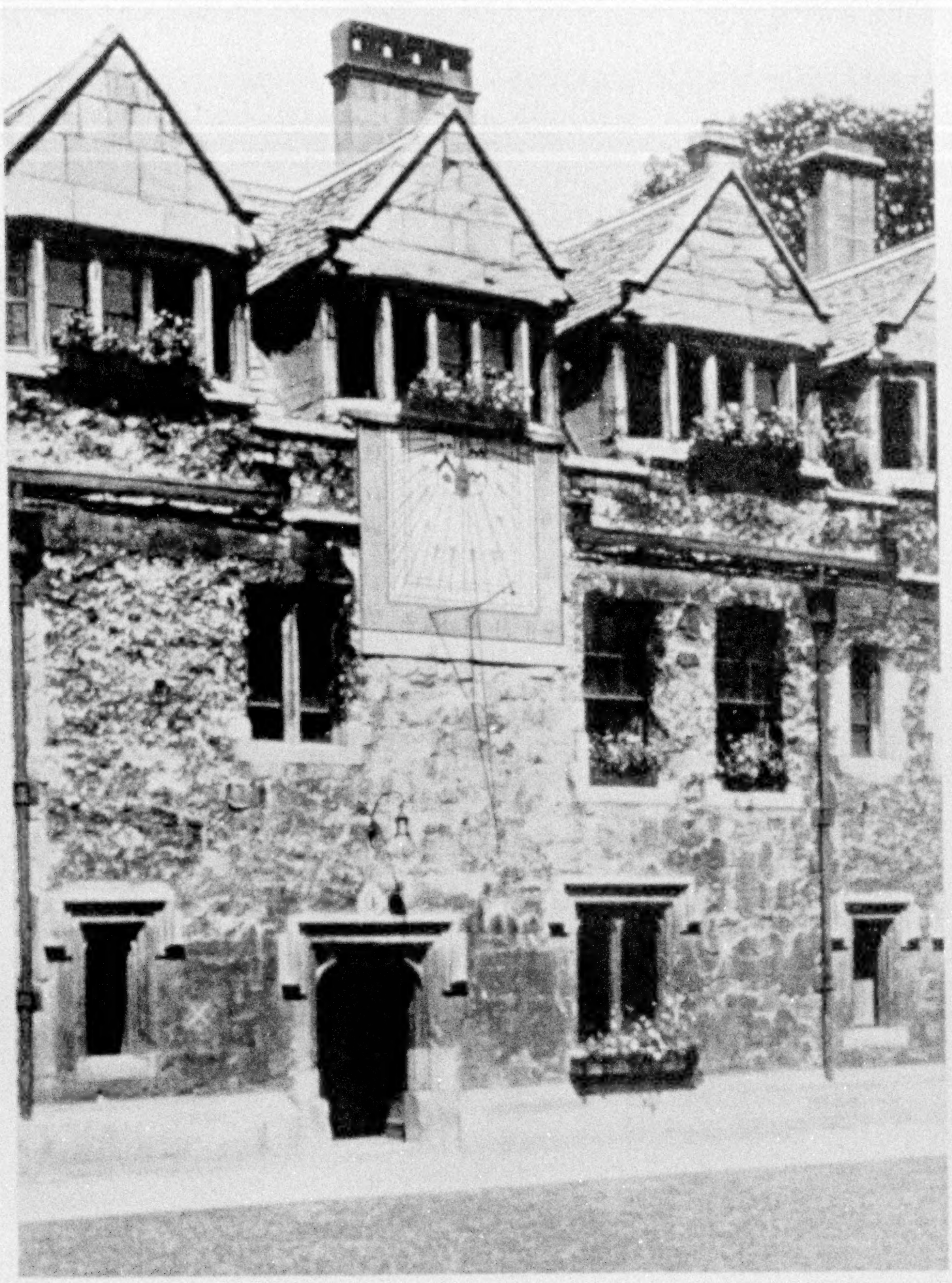
"But . . . but, what for?" was the only thing I could stammer.

"Your name and college, sir," the senior proctor insisted in the same polite tone. The two bulldogs towered menacingly. They are chosen for their fleetness of foot, so there would have been little use in making a "break" for it. Besides, they would surely have grabbed one of the long black tassels of my gown (which Oxford tradition says were provided for this purpose) and yanked it off. My name was sewed in the collar!

But I didn't want to run. I felt I hadn't done anything. There was a mistake somewhere.

"What is my offense, sir?" I asked.

But there was little use to protest or



Photograph by Ewing Galloway

A VENERABLE SUNDIAL FACES THE BRASENOSE QUAD

The odd name of the college is probably derived from an ancient brass knocker, a lion's head, on the old hall. It was carried away in the 14th century and only returned to the college in 1890.

Photograph by Gillman

FOLLOWING THE HOUNDS IS A FAVORITE SPORT AMONG OXONIANS

Fox hunting behind a baying pack or pursuing hares afoot with beagle hounds provides both fun and exercise for young sportsmen. When driven from its home the hunted animal runs in great circles about the countryside and frequently returns to its starting point. However, the dogs often switch to a new quarry several times in the course of a chase, with the result that their intended victim sometimes gets away.

expostulate, or to assume an air of injured innocence. I knew well enough that such matters are not discussed on the streets; so I gave the proctor the information he desired. Then, with an equally polite "Thank you," a tipping of the mortar boards, and a little bow, the cavalcade moved on.

The next day I received a brief note requesting my presence before the proctors "precisely" at a certain hour and date.

THE TRIAL AND ACQUITTAL

And I had to go. Not even resignation from the university would have absolved me from this duty, for the university court has equal jurisdiction with all other courts of the realm. Its summons must be obeyed by all. In fact, any local case, except those relating to freehold, in which one party is a member of the university may be taken out of other courts and tried in that of the university, if the vice chancellor sees fit to exercise this right. An "undesirable" person may be banished from the city of Oxford by the vice chancellor's court.

In cap and gown, I appeared at the appointed time in the Clarendon Building, where petty cases such as this are heard. The two proctors were seated behind a table. There was also a court clerk.

The senior proctor tipped his mortar board to me when I entered the room. I removed my cap.

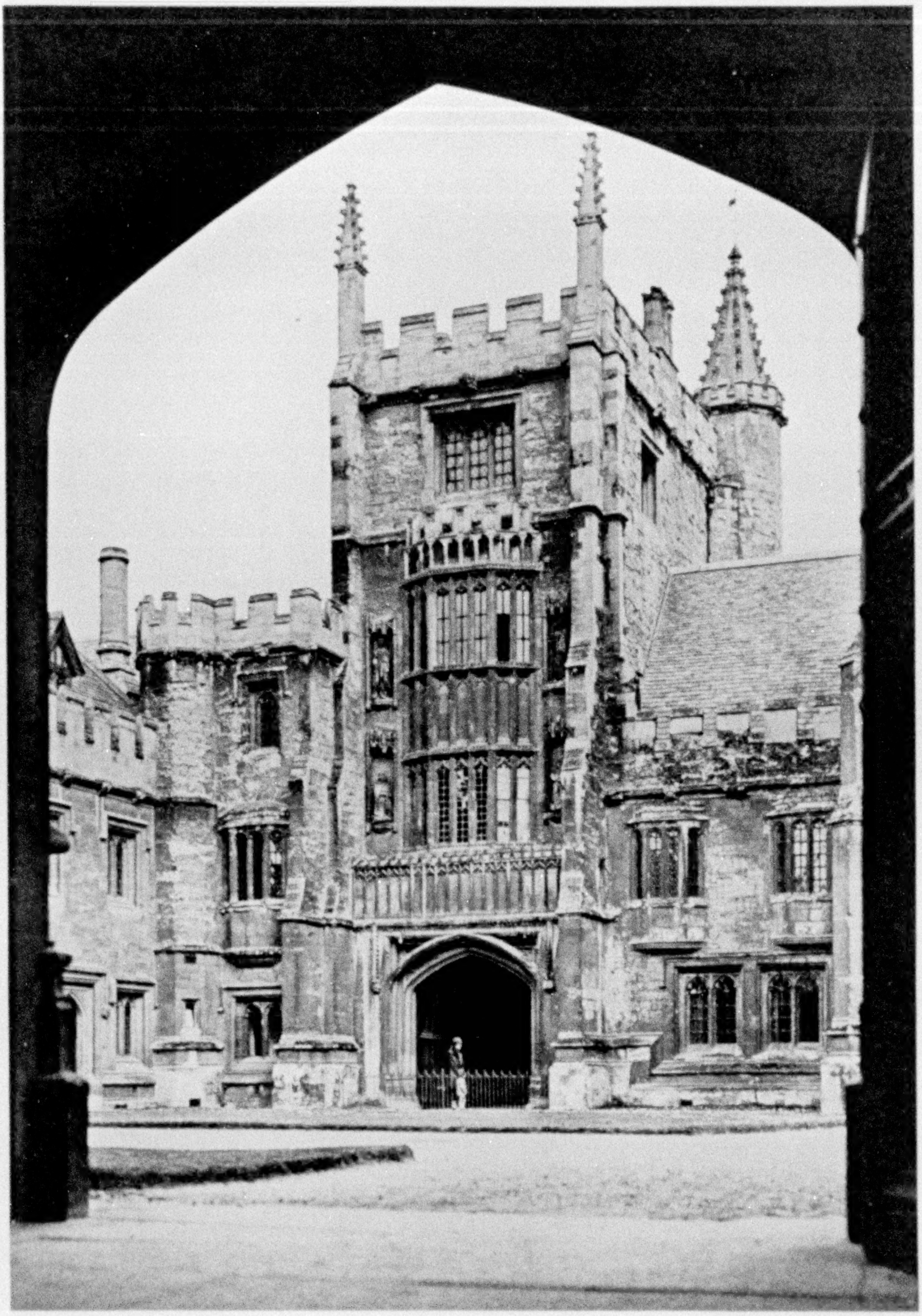
"Mr. Long, you were seen apparently coming out of an unlicensed dance hall on Cornmarket Street two evenings ago. Is there anything you wish to say?" the senior proctor began.

I replied that I had not been in the dance hall.

"Mr. Long, did you contemplate a visit to this unlicensed dance hall?" he asked.

I answered that I had not; that I was not aware that I was standing before the place, and that I had halted only to wait for another undergraduate accompanying me.

"Very good, sir. That will be all. Oh,



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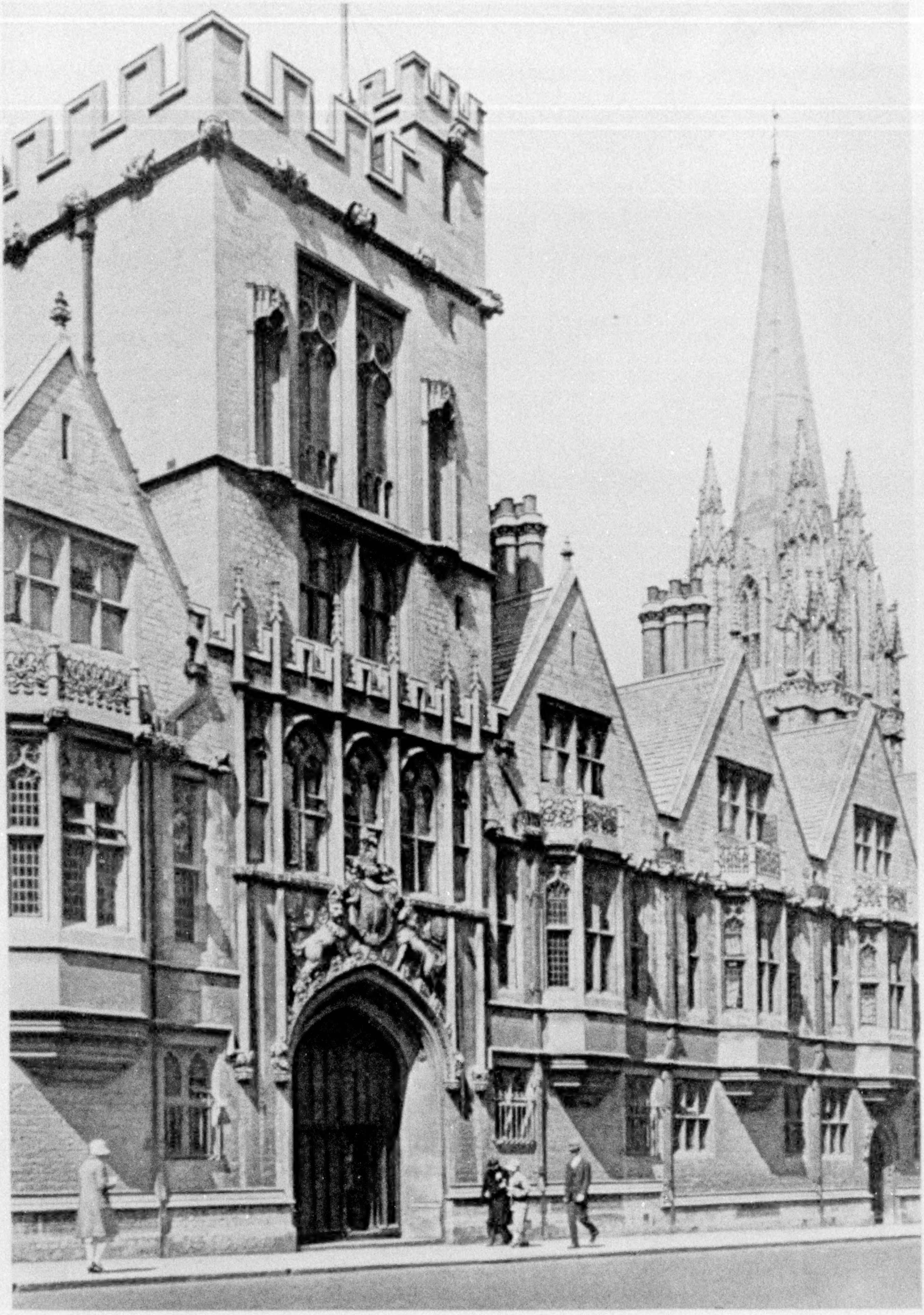
MAGDALEN COLLEGE HAS BEEN A FAVORITE OF ROYALTY

Many royal names have been associated with the history of Magdalen since the days when Edward the Fourth visited there. The present Prince of Wales spent two years in residence as an undergraduate and won for himself a place of deep affection in the hearts of his fellow students. Founder's Tower (above) contains a fine banqueting hall and suite of state bedrooms.



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THE HIGH STREET FRONTAGE AND GATEWAY OF BRASENOSE COLLEGE

Although of recent construction, such exquisite taste has been used in the design and execution of the new college buildings that they are more than worthy successors to the original foundation, begun in the first summer when "Bluff King Hal" occupied the throne of England. To the right is the spire of the Church of St. Mary the Virgin (see, also, pages 564 and 585).

one minute! May I direct your attention to the statute forbidding undergraduates to loiter on the streets. Good day, sir," the senior proctor replied, tipping his mortar board.

My word was accepted without question, immediately, which I learned was the custom of the court. If I had been caught in the place, or in a public house, or in any other resort forbidden by statute, the penalty might have been a monetary fine or "rustication" (a temporary dismissal from the university), or I might have been permanently "sent down," depending upon the seriousness of the offense and upon my record.

OXONIANS HAVE THEIR OWN "UPS AND DOWNS"

The expression "sent down" is typically Oxonian. One never "matriculates" at Oxford; one "comes up." One does not graduate or leave for a vacation—at least, not in common parlance. One "goes down" or, in the event of a misdemeanor, one is "sent down."

The American word "student" is never used, I was advised, to designate undergraduates in general. The dons, or teachers, at Christ Church are sometimes known as "students," but the members of the undergraduate body of Christ Church, or of any other college, never are. There are the "Delegacy of Non-Collegiate Students" and the "Society of Oxford Home Students," but their members are always referred to as "undergraduates."

Undergraduates are divided into two kinds, scholars and commoners. Scholars at Oxford are in every respect more important than commoners. The former hold scholarships which they have won at secondary schools or in public examination. But the difference is not merely one of finance. Scholars must read for an Honours degree (commoners may if they wish), and every act of the college to which they belong is done in the name of its "Head, Fellows, and Scholars."

In the medieval university the commoner had no place at all. Even to-day only the scholar, or those above him in college, may bear of right the arms of the college on his blazer, or tobacco jar, or stationery, although no rule restricts the commoner, who is usually the most flagrant displayer of them. The gowns of the two classes are different, that of the scholar being long and flowing, while the commoner's is short, like a jacket, and has no sleeves.

When I had learned the distinction between scholars and commoners I was told that scholars are called "demies" at Magdalen, because they originally had half a Fellow's allowance, and "postmasters" at Merton. "Fellows" correspond to instructors in American universities. They are usually selected from the most brilliant graduates. Together with the tutors, who personally supervise each undergraduate's work weekly, the fellows of a college are popularly known as "dons." I discovered that the term "professor" must be guardedly employed if I was to be properly understood. An Oxford professor is a don of some college and usually lectures in the college of which he is a member and a don. There are also "Professors of the University," most exalted of dons, who are also dons of some college. A lecturer or reader, a sort of assistant professor, may or may not be a don. At any rate, he is never referred to as a professor.

When I thought I was in a fair way to grasp a coherent picture of the whole, I was finally informed that All Souls has no scholars; that Keble College has no fellows; that Christ Church, as a cathedral chapter, has a dean and canons, in addition to students (fellows) and scholars, and that one of the colleges of Oxford University is called "University College" for no particular reason—well, I was inclined to throw up my hands and despair of ever getting untangled. I soon realized, however, that there is precious little value in having the terms all "straight," anyway. Classical, but not classified, one must accept Oxford or not at all.

THE RHODES SCHOLARS AT OXFORD

Oxford is, perhaps, the best known of all foreign universities in America, owing to the Rhodes Scholarships, granted since 1904 under the will of the late Cecil J. Rhodes, South African magnate. Each year 32 American college students, usually graduates, are selected on the bases of their records in American colleges and a personal interview, and are awarded a

POST OFFICE

Photograph by Clifton Adams

POSTING A LETTER IN ONE OF OXFORD'S RED PILLAR BOXES

A small notice just above the letter-drop gives the time of the next collection, "5:15 p. m." It is changed by the postman after each round.

three years' scholarship at an Oxford college. An equal number are selected from the British commonwealths and the colonies of the Empire. In all, about 200 Rhodes Scholars are in residence at Oxford each year.

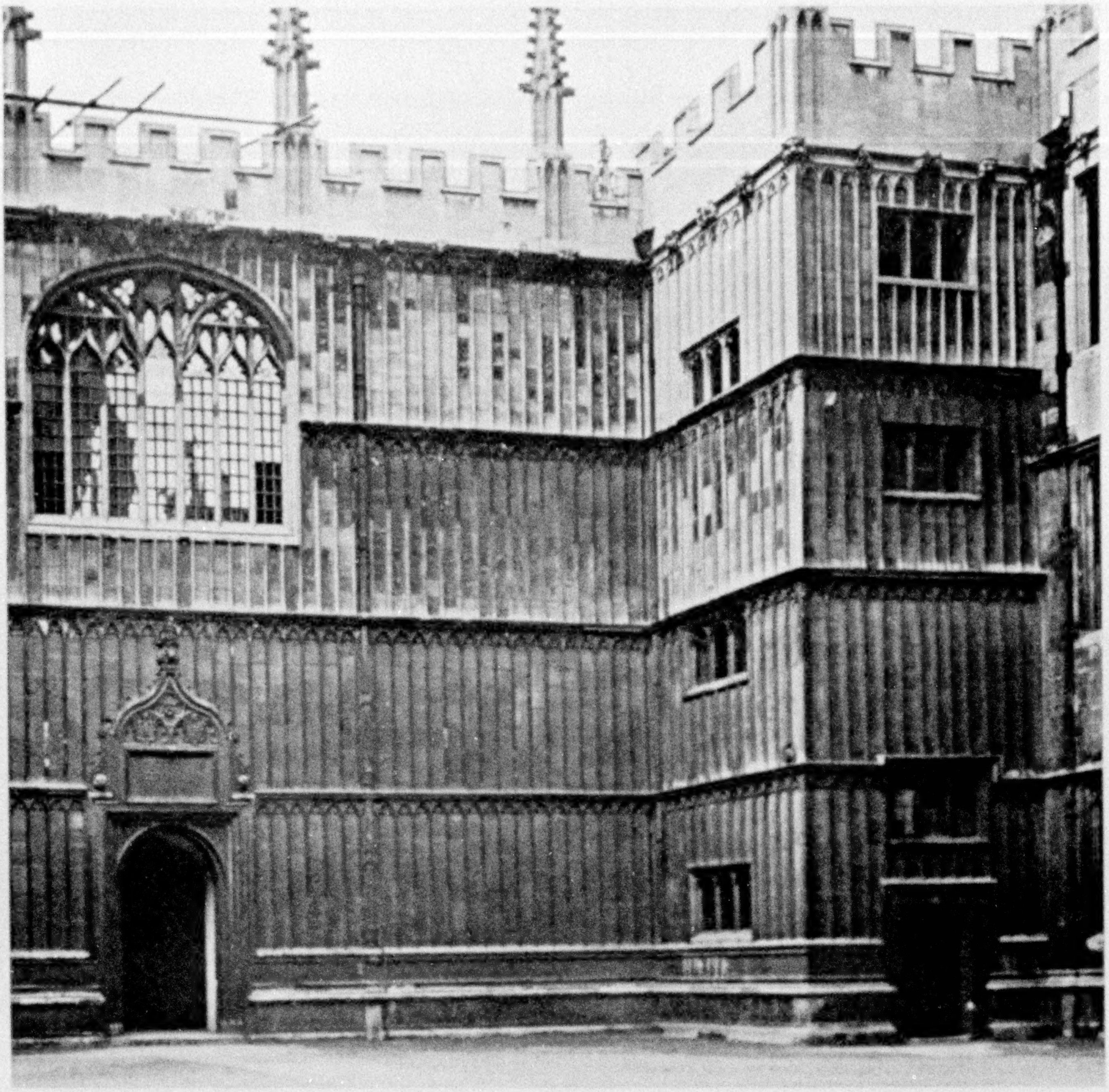
Rhodes, who believed that eventually all the English-speaking peoples of the world would make common cause, hoped through these scholarships to produce leaders for his dream.

I have heard unsympathetic observers at Oxford refer to the American Rhodes Scholars at the university as "the last of the aristocrats," implying that they too often band together and keep themselves aloof from their fellow undergraduates. A difference in age and different heritage of interests, hobbies, and traditions do make fusion, even orientation, difficult.

Most of the Rhodes Scholars with whom I became acquainted at Oxford were of a fine type — friendly, helpful, a bit reserved, as perhaps might become a national of another country, and studiously inclined. Some of the American Rhodes Scholars have been elected to Oxford's most exclusive social and literary clubs and societies, and most of them have enviable scholastic and athletic standings during their residence at the university. The Rhodes idea may be said to be fulfilled to the extent that mutual understanding has been fostered by the contact and conflict of youthful ideas of representative members of the English-speaking nations.

A year ago the Rhodes Trustees issued invitations to former Rhodes Scholars the world over to attend a "reunion" at Oxford from July 4 to July 11, 1929. The event was in connection with the opening of the beautiful new Rhodes House, the most recent addition to the galaxy of Oxford's architectural treasures.

Twenty-five years have elapsed since the first Rhodes Scholars arrived at Oxford. On the evening of July 5 a considerable number of that first group attended the Trustees' dinner in the Hall of Rhodes House, on South Parks Road. Nearly all the two hundred and twenty guests were old Rhodes Scholars. The



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THE BODLEIAN AT OXFORD IS ONE OF THE WORLD'S GREATEST LIBRARIES

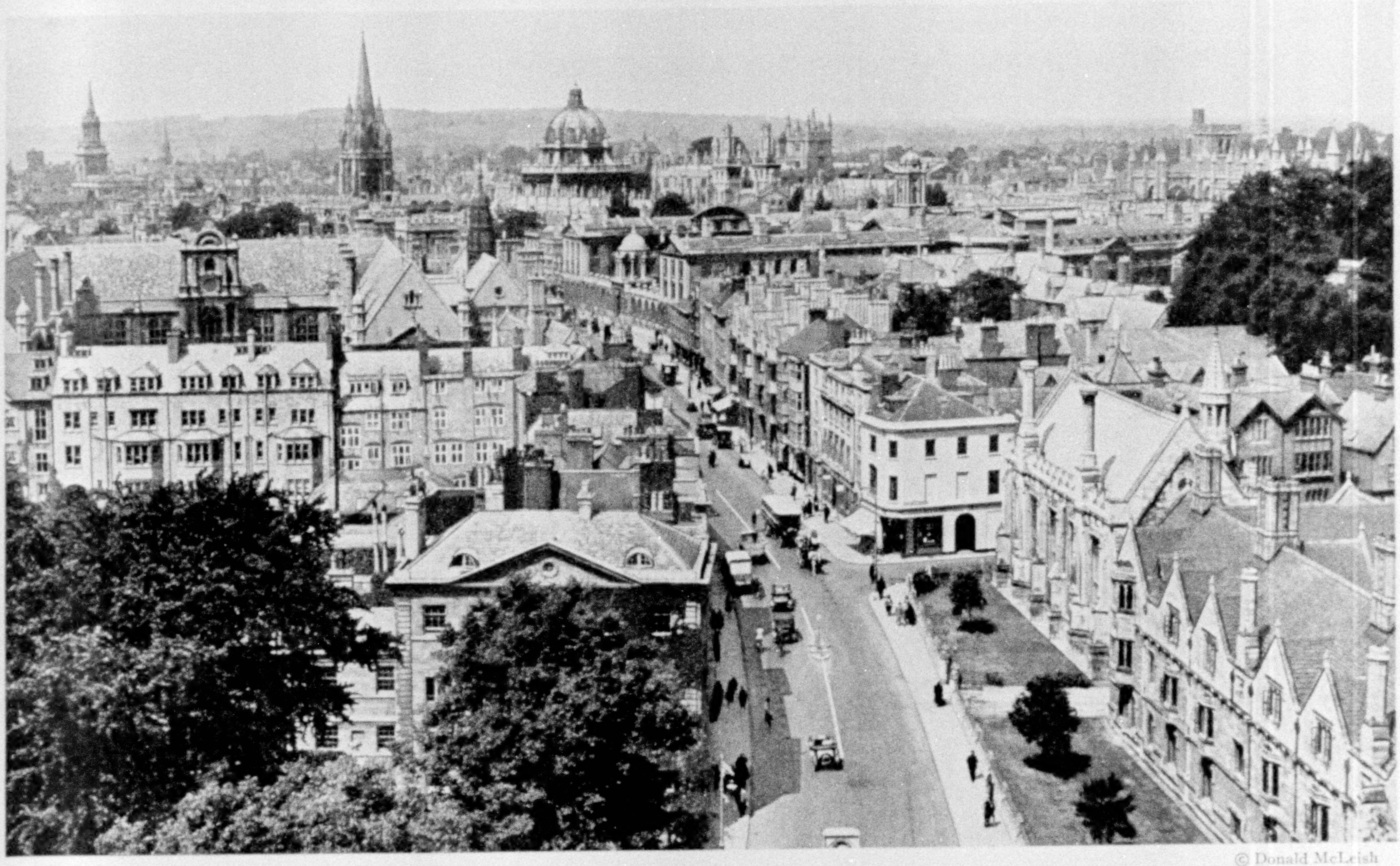
Founded more than three centuries ago by Sir Thomas Bodley, the superb collection now contains about 1,250,000 bound volumes and some 40,000 volumes of manuscripts, many of them of inestimable value. Among its special treasures are a copy of Gutenberg's Bible, a Shakespeare collection of 5,000 volumes, and manuscripts of Wycliffe's Bible and of Shelley's "Prometheus Unbound" (see, also, text, page 587).

largest number were from the United States, but there were some who had come, for this event, all the way from such distant lands as South Africa and Australia. Mr. Stanley Baldwin presided and the Prince of Wales, as principal speaker, proposed the health of the Rhodes Scholars.

In addition to Rhodes Scholars, many other Americans, like myself, are attracted to Oxford by the unrivaled resources for research afforded by the Bodleian Library, and also because the atmosphere of the city is conducive to literary and academic work. Oxford is a mecca for American college professors and instructors on sabbatical leave.

TWENTY-FOUR WEEKS OF STUDY IS THE OXFORD YEAR

The method of study at Oxford is quite distinct from that in American universities. The actual time in college is much less, too, for the Oxonian usually comes up early in October for a term (the Michaelmas) of eight weeks, followed by a vacation of six weeks at Christmas; then another term (the Hilary) of eight weeks,



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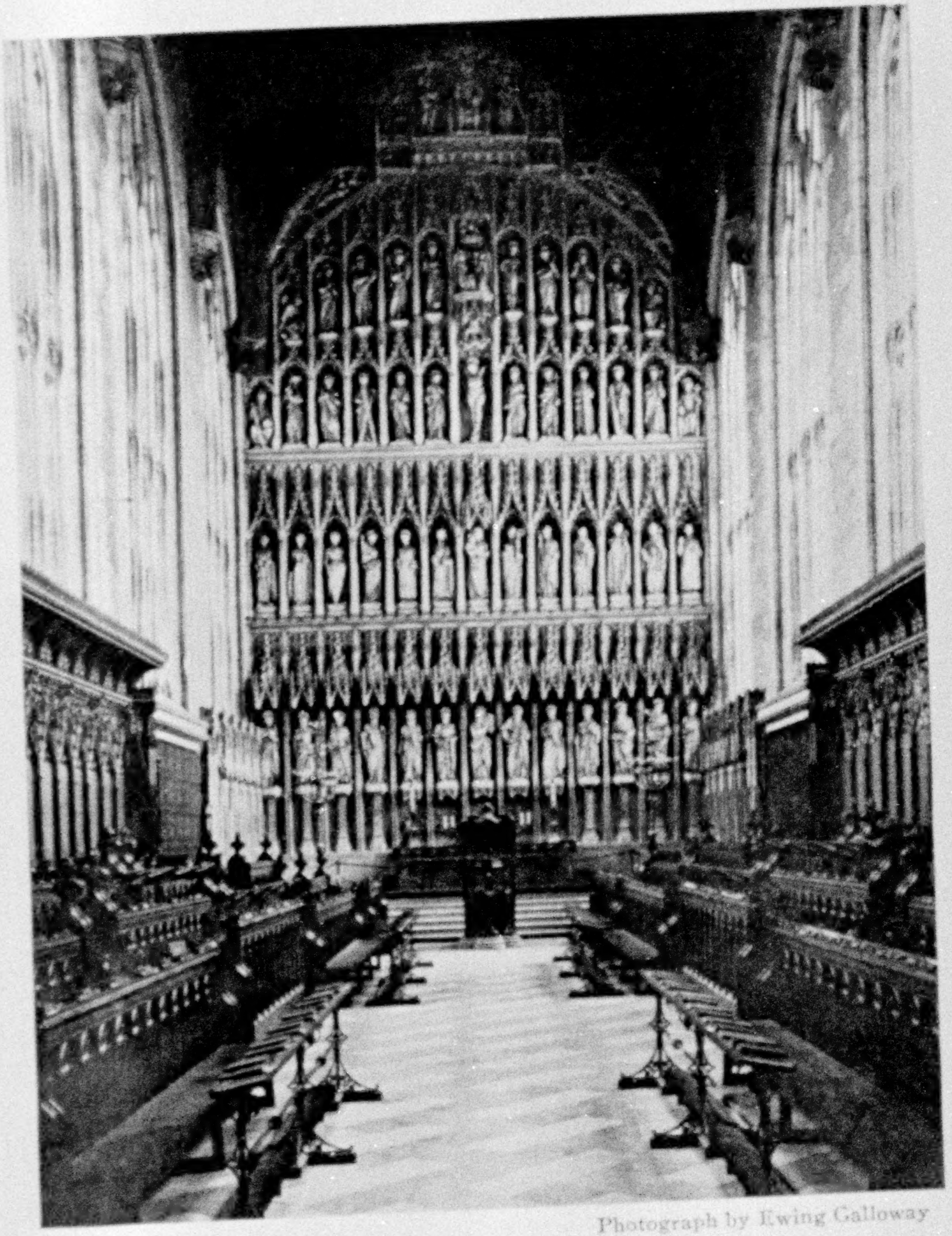
"THE HIGH," AS IT IS FAMILIARLY KNOWN TO OXONIANS, IS ONE OF THE WORLD'S MOST INTERESTING THOROUGHFARES

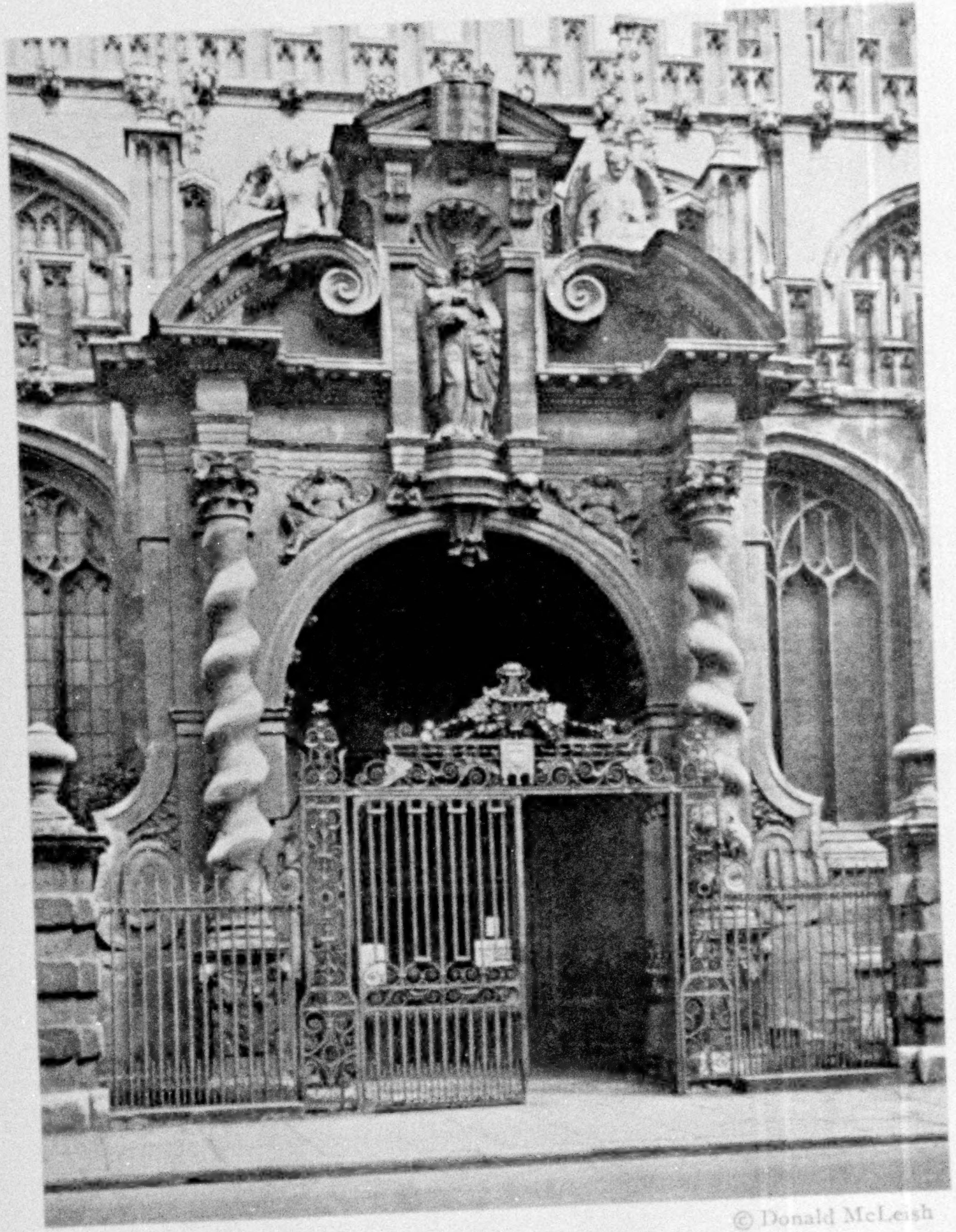
Running from the center of town at Carfax, out to the Magdalen Bridge, High Street passes through the very heart of the Oxford University district. Several of the colleges face on it, as well as the exquisite Church of St. Mary the Virgin (see pages 564, 580, and 585), whose spire rises near the dome of Radcliffe Camera (see page 589).



Photograph by Ewing Galloway

FIGURES OF ANGELS, APOSTLES, MARTYRS, AND PROPHETS ADORN THE SCREEN IN NEW COLLEGE CHAPEL

Paradoxically, New College derives its name from the fact that it is one of the oldest institutions at Oxford, its foundation dating from 1379.



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THE CHURCH OF ST. MARY THE VIRGIN HAS MANY HISTORIC ASSOCIATIONS

Peter Martyr, Cranmer, John Wesley, Keble, Pusey, and Newman all made history, much of it tragic, within the ancient walls of St. Mary's.

Photograph by Topical Press Agency

PREP SCHOOL BOYS TAKE PART IN A "RAG" AT REGATTA TIME

Youthful students at a preparatory institution near the university are engaged in a practice upon which they will frown disdainfully after they have become Oxford undergraduates. The approved "rag" of pure Oxford vintage is an affair of real wit and not a mere clowning exhibition such as this.

with six weeks' vacation at Easter; and a final (Trinity) term of eight weeks, followed by a three months' summer vacation.

The long vacations are not entirely "rest" periods. A great deal of supplementary reading is assigned for these intervals. Three years is the customary length of time required to complete the course for the Bachelor of Arts degree.

In contrast to American schools, Oxford's lectures have relatively little importance. No attendance records are kept and an undergraduate might possibly go through his entire course without attending a single one. The real check is the tutor, to whom the undergraduate is immediately assigned upon his arrival and to whom he must report at least once a week for assignments, recitations, and informal discussions. The tutorial system allows for much greater development of a student's natural bent and individuality, but it is practical only where the number of students is not large. The average number of students at an Oxford college is about 200. In the regular course of events, examinations do not come until near the end of the second year of residence, and everything depends upon the showing made in them.

The teaching staff at Oxford consists of university professors, readers, lecturers, and demonstrators, numbering more than 100, and about 300 college fellows, tutors, and lecturers.

As is the case in American universities, there are faculties leading to specific degrees, the principal ones at Oxford being Theology, Law, Medicine, Literae Humaniores, Modern History, Medieval and Modern Languages, Oriental Languages, and Natural Science. Both the colleges and the university give lectures, and each coöperates to promote academic harmony and efficiency. Members of any college are at liberty to attend any lectures, university or collegiate, which their tutors recommend and without the payment of special fees.

THE CHARM OF THE TOWN ITSELF

But the academic, vital and fundamental as it is, is really the reverse side of the medal. Oxford is more than classrooms, and degrees, and rules and regulations, and their exceptions. F. D. How no doubt exaggerates when he says: "For beauty and for romance the first place among all the cities of the United Kingdom must be given to Oxford." But one must search far to find an equal of the mellow beauty of its winding streets and its classic buildings, or of the pastoral charm of the meadows and walks along the Cherwell and the Isis, or of the romantic associations of the place, from Alfred the Great's day to the World War.

Walking down High Street, affectionately known in Oxford as "the High," I believe I caught some of this feeling of beauty and romance in the long curved fronts of the colleges and churches and other stately buildings which border it; for High Street is Oxford and, incidentally, one of the most beautiful streets in the world.

Beginning at Carfax, the center of town, it curves gently for half a mile or more to the Magdalen Bridge, unfolding vistas of spires, and stout stone walls, and moss-covered cornices, and towers, and courtyards, and a thousand and one things, each more lovely than the last, until one begins to regret that such delight cannot last and must dwindle at the end to some mediocrity.

But at the end of the High is reserved the most charming view of all. Rising gracefully from the buildings of Magdalen College is an exquisite Gothic bell tower, from which each year a 17th century eucharistic hymn is sung at sunrise on the first of May.

Directly opposite are the verdant, spacious grounds of the Botanic Garden, the oldest in England, and, to close the picture, beyond is the River Cherwell, with its screen of bordering elms and willows and the stately arched bridge which carries the High toward London town.

Some prefer to reverse the picture I have just drawn, and it is charming the other way. But Carfax, with its noisy bustle and confusion, brings one just a bit too suddenly to earth. It is better to linger on Magdalen Bridge, where one may drink deep of scenes that belong to another world—truly a world of romance and beauty.

There is yet another spot in Oxford where one may feel this age-old unreality. Not far from the High is a round-domed building (the dome is the entire building) known as the Radcliffe Camera, the reading room of the Bodleian Library. A small fee will admit one to a stairway which winds up and up to a circular outdoor gallery far above the street (p. 589).

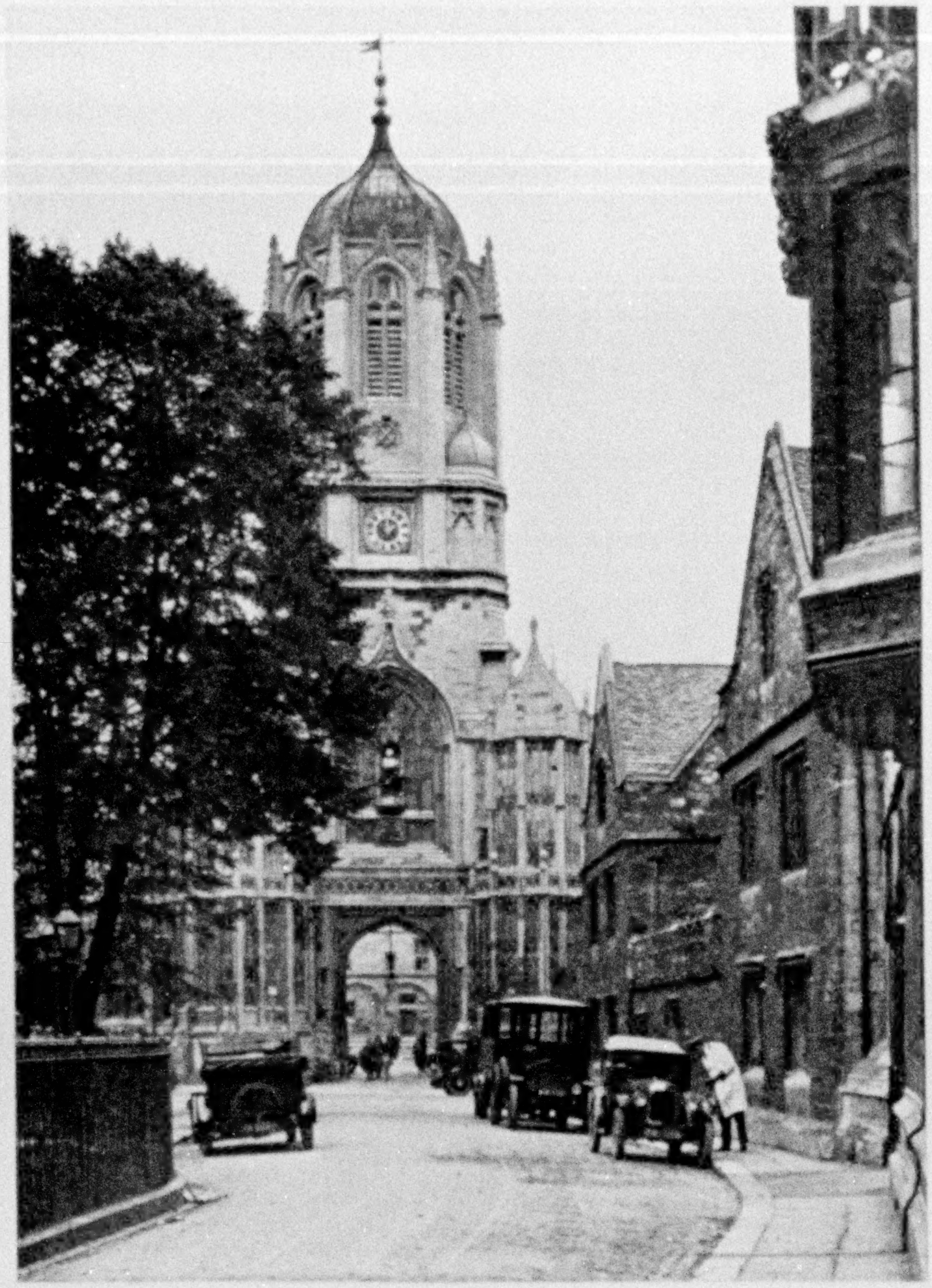
Below and all around is spread a veritable forest of stone turrets, towers, arches, battlements, spires, and delicate tracery. Massive pieces of masonry they undoubtedly are, but from this height they seem light and airy, exquisitely delicate and graceful. Refinement of detail is lost in the splendid upward sweep of whole buildings, although one is conscious of embellishments which carry the eye and delight the spirit (see, also, page 567).

Haphazard as was Oxford's growth, there is a symmetry in her architecture which many another city of less spontaneous origin might envy.

Beyond the colleges, to the east, is the green-forested slope of Headington Hill; to the south, perhaps a bit dim in the mist which rises from the meadows along the Isis, is Boars Hill, nearest of the gently rolling Berkshire Downs; to the west are the railroads and the commercial districts; and to the north are the principal college gardens and the University Parks.

"THE GRANDAD OF ALL ENGLISH LIBRARIES"

A short cut from the Radcliffe Camera through the old Divinity School leads to



Photograph by Clifton Adams

TOM TOWER HOUSES GREAT TOM, THE LARGEST OF OXFORD'S MANY BELLS

Since 1684 the 7-ton giant has sounded curfew for town and gown, except during the World War. At 9:05 every night its booming voice sounds 101 times—the number of original students at the college plus one—giving the signal throughout the university for the closing of college gates. Those who fail to heed the summons must pay "gate money" until midnight, after which hour the college gates open for no one. Tom Tower belongs to Christ Church, the largest college in Oxford.

the Bodleian Library, the grandad of all the English libraries in the world. Over the entrance doorway is a Latin inscription, and the worn wooden stairs that lead to the Library itself creak as if their last days had come. But these stairs have creaked to the footsteps of countless thousands for centuries (see page 583).

The Bodleian is one of the six libraries that enjoy a right to a copy of every book published in the United Kingdom. In size its collection is exceeded in western Europe only by those of the British Museum and of the Bibliothèque Nationale. As a source of material concerning the life and letters of England and of a good deal of the rest of the world, it is unsurpassed.

The Bodleian still clings to the ancient system of listing its volumes in huge parchment index books, pasting in a slip of paper when new books arrive. I missed our handy card-index method, although many of the manuscripts are now listed by cards.

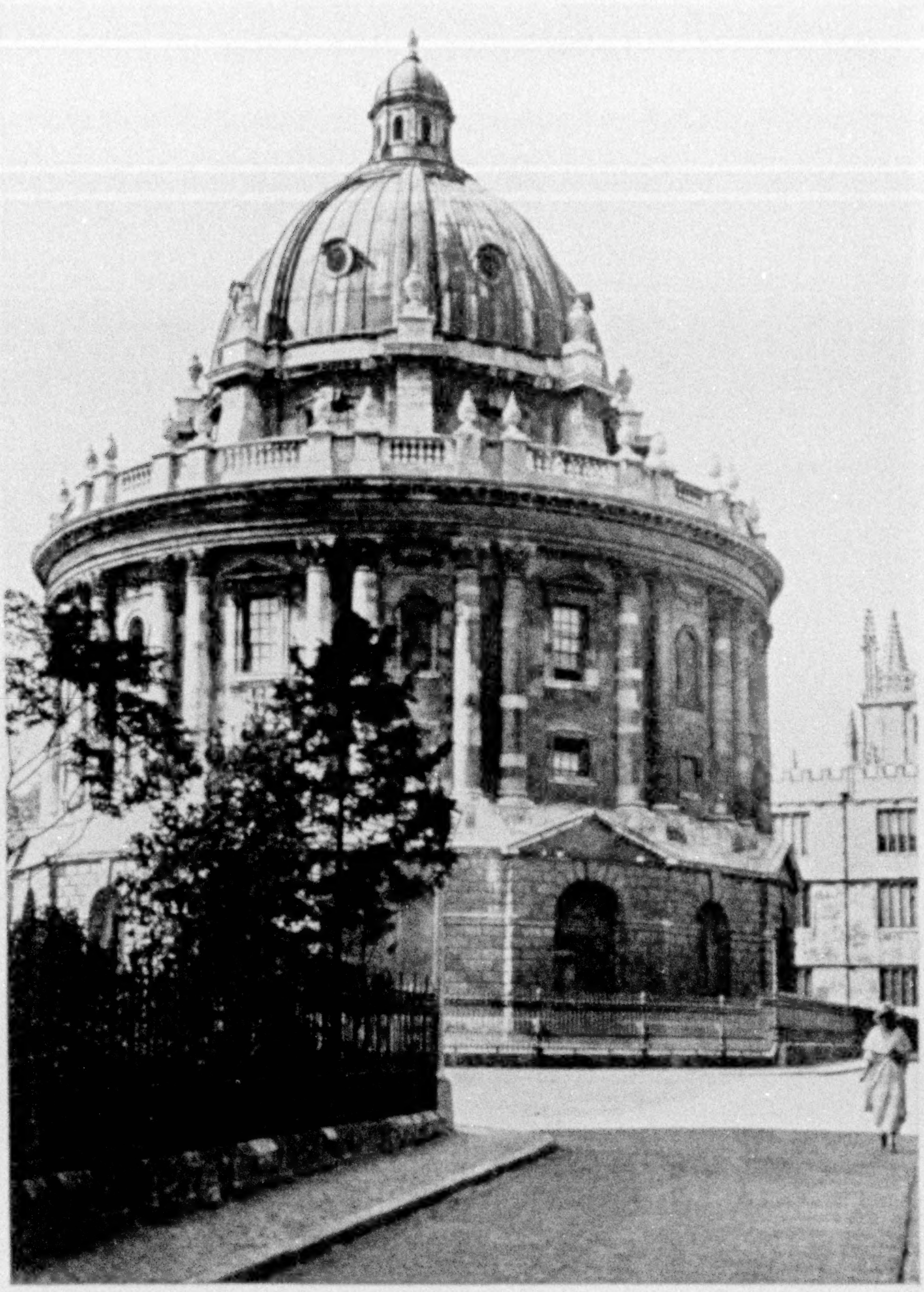
WHERE THE OXFORD DICTIONARY WAS COMPLETED AFTER 44 YEARS

Close to the Bodleian Library is the scene of the greatest philological enterprise in recent years. Within the smoke-incrusted walls and time-chipped exterior of the Ashmolean Museum, which should not be confused with the New Ashmolean Museum in another part of town, the final pages of the great Oxford English Dictionary, the publication of which was begun in 1884, were last year completed for the printers (see page 574).

Forty-four years is a small span in the life of a language, but in these days of high-speed production it seems an incredible amount of time to be devoted to the publication of a single undertaking, and particularly to one so costly as a master dictionary. With the completion of this titanic work, the greatest single effort in its field since the invention of printing, academic Oxford may have an additional right to feel unconcerned about upstart modern enterprises which threaten to overwhelm her.

The preparation of so prosaic a thing as a dictionary in even so somber and uninviting a structure as the Ashmolean Museum was not without its humorous incidents. One of the editors told me that when work was shifted to this building, in 1901, it was for some time liable to interruption by strangers inquiring for the New Ashmolean Museum. An assistant who was specially exposed to such inquiries finally took a sheet of cardboard, printed on it, in large capitals, "This is NOT the Ashmolean Museum," and hung it on the inner door.

As this expedient did not prevent inquiry being made for other university buildings, he successively added, in alternating lines of black and red ink, "Nor the Sheldonian Theater," "Nor the Bodleian Library," "Nor the Clarendon Building," and, finally, "Nor the Martyrs' Monument—as yet!"



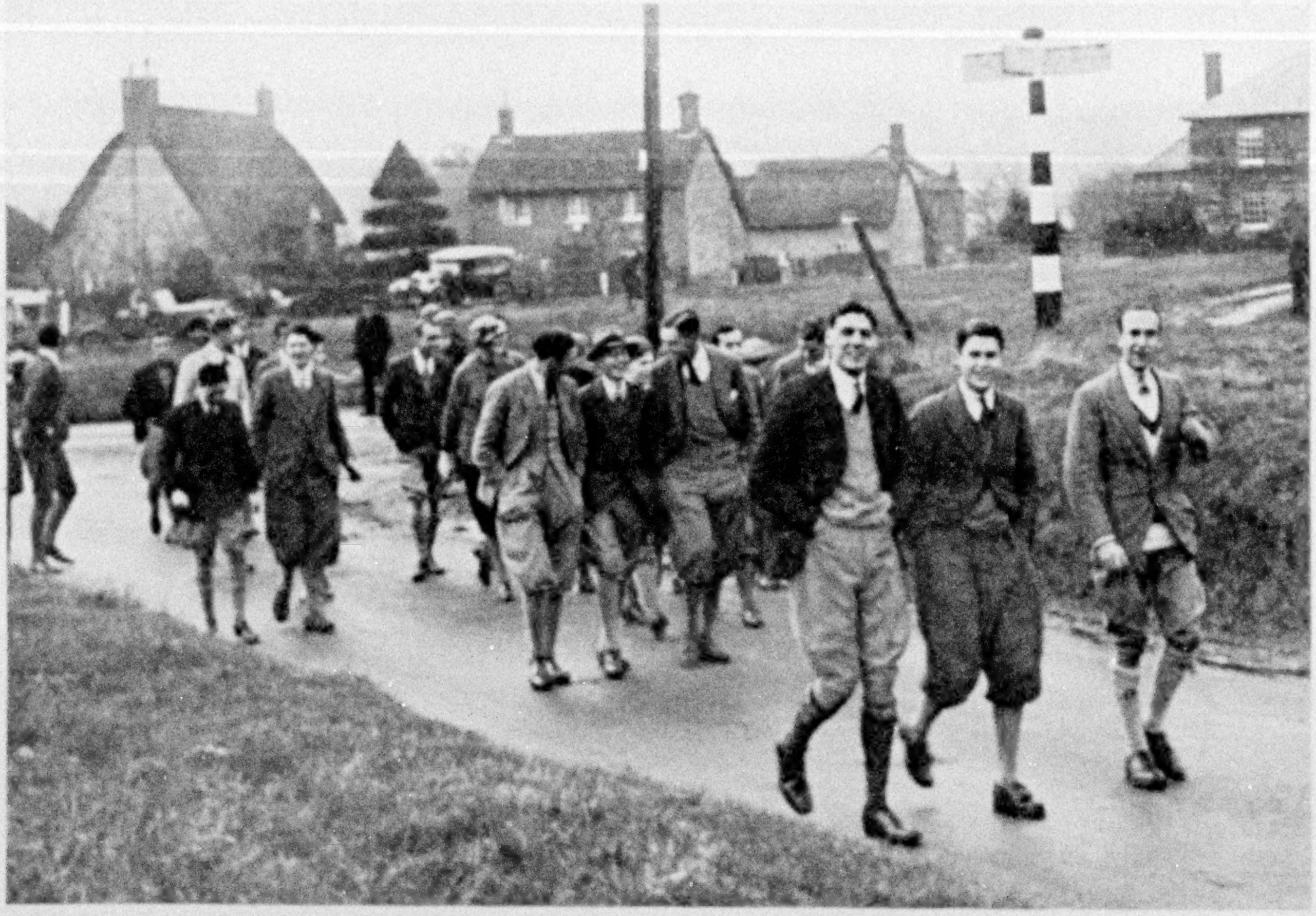
Photograph by Charles E. Riddiford

A PUPIL OF THE IMMORTAL WREN DESIGNED RADCLIFFE CAMERA

James Gibbs built this unique Renaissance structure for Radcliffe, physician to William III. It is now used as part of the Bodleian Library, containing a general reading room and housing most of the newer books of that famous collection. The Divinity School (at the right) was built in 1445-80, on a scale of great magnificence, but during the Commonwealth was used as a storehouse for corn.

The district surrounding Oxford is mostly rolling farmland, broken here and there with a bit of woodland or marsh. "The whole country," one English writer says, "is of that peculiarly English character which so arrests the attention of foreigners—green, tranquil, mellow; old yellow hamlets bathed in afternoon sunshine; the peaceful corn fields, where the pathway winds along the hedge, under the shadow of great oaks and elms; the meadows, whence the last load of hay is just being carted off and the vivid green below shows like a carpet of emeralds; the church, six hundred years old; the Manor House, of 'gray renown'—all such things as speak of immemorial tranquillity and unbroken order and that humble happiness which we sometimes think a mere poetic fiction."

The "corn field" to which the writer re-



Photograph by Gillman

OXFORD UNDERGRADUATES HIKING TO THE SCENE OF A BEAGLE HUNT

"Hunts," or "packs," such as the Christ Church Beagles, are usually organized by a few wealthy undergraduates, but anyone may join the regular members on the day's hunts—anyone, that is to say, who will not refer to the hounds as "dogs," or make the tactical error of bringing a gun. The object of the hunt is to tire out the quarry by showing greater endurance, and, even though one knows which way the hare is circling, it is not considered good sportsmanship to cut across the diameter of the circle to head it off.

fers would be called a "wheat field" by Americans.

EACH COLLEGE HAS ITS DISTINCTIVE FEATURE

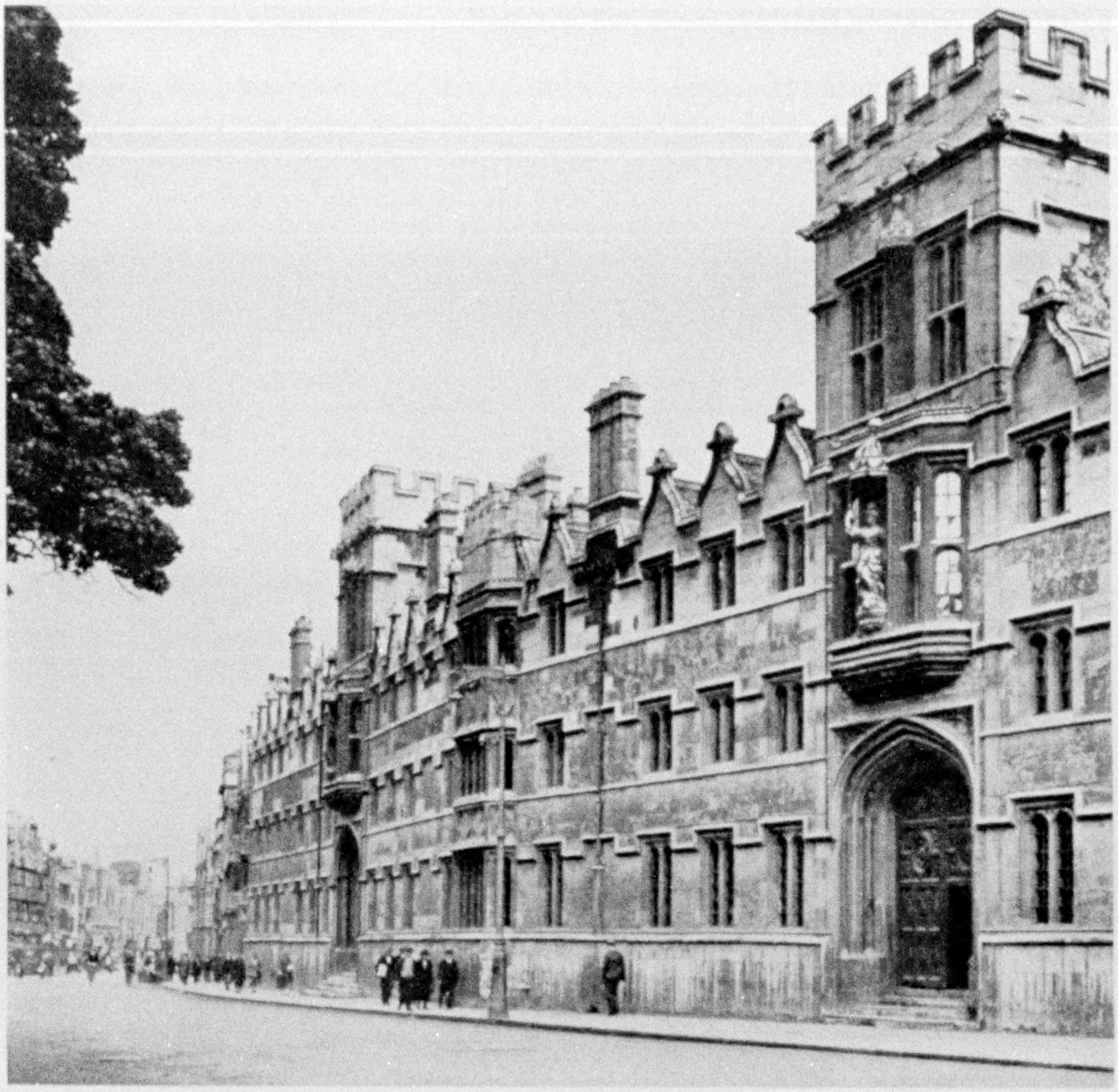
Each college in Oxford has so many distinct and interesting associations and traditions that even a listing of them would require more space than such an article as this permits. St. John's and its matchless garden front; Worcester and its lake and "cottages"; Exeter's Chapel and tapestries; Wadham's charming Fellows' Garden; New College's cloisters and altar screen and stained glass; the beautiful reredos of the All Souls' Chapel; Magdalen and "Addison's Walk"; the Library and "Mob Quad" at Merton. The list is almost endless.

In Tom Quad, Christ Church has the distinction of possessing the largest college quadrangle. This magnificent inclosure measures 264 by 261 feet, being almost large enough for a football field. In the center is a fountain and around the walls can be traced the commencement of cloisters with which it was intended to complete the quadrangle. To my mind, the Quad is at least as attractive without the cloisters.

In Christ Church I discovered another of those charming inconsistencies typical of Oxford. As an integral part of the college, yet of separate foundation, is Oxford Cathedral, the smallest in England. It serves both as a college chapel and as the cathedral church of the district. During the World War, Christ Church was headquarters for the Royal Flying Corps ground school.

CLASSES MUST NOT INTERFERE WITH SPORTS FROM 1 TO 5 P. M.

Christ Church naturally led my footsteps to the pleasant meadows which stretch from the college walls to the barges



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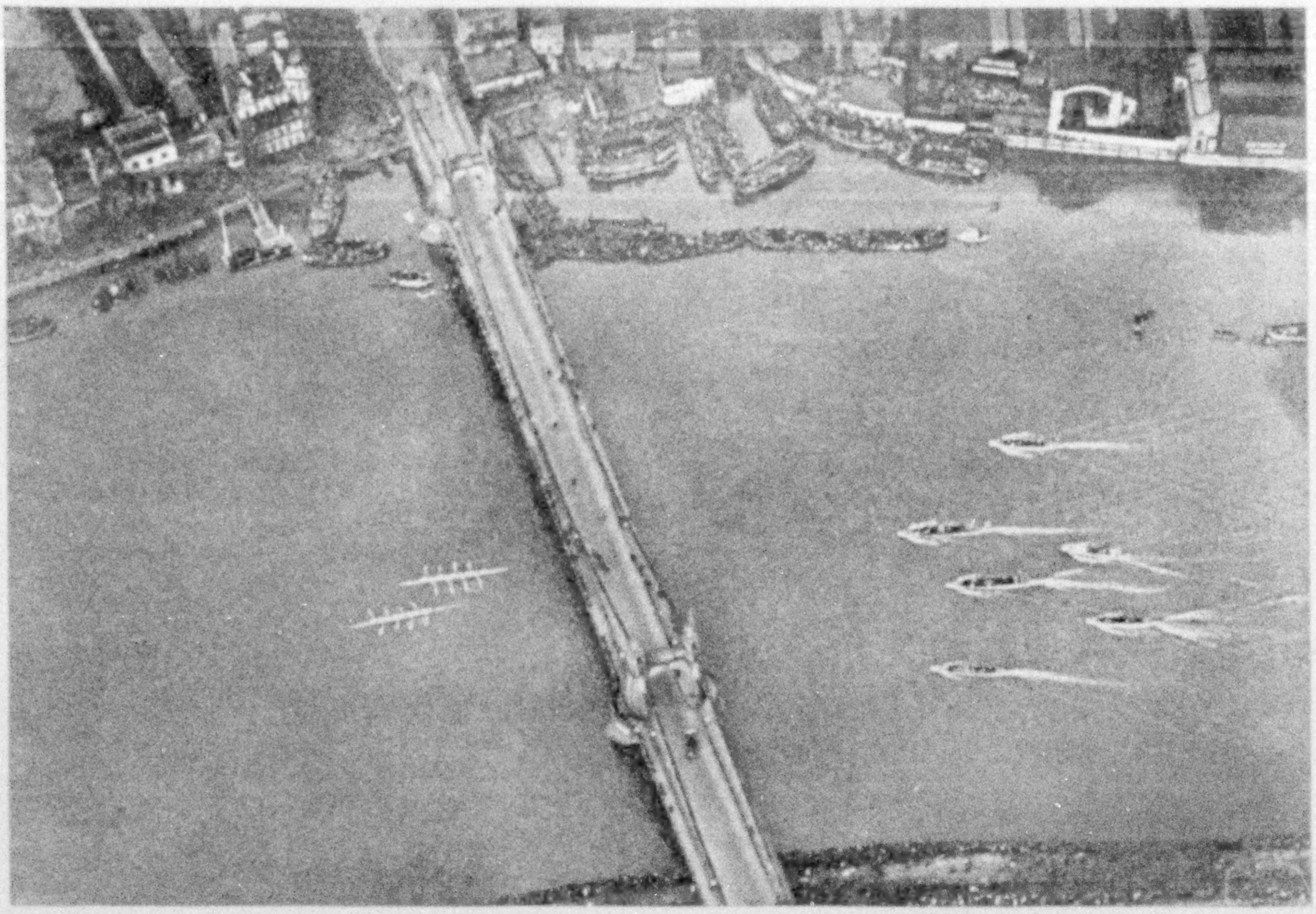
UNIVERSITY COLLEGE CLAIMS AN ANCIENT LINEAGE

Balliol and Merton both dispute University's claim to the most venerable Oxford collegiate ancestry. Although it is quite generally established that it received its first endowment from the Bishop of Durham in 1249, many of its adherents claim Alfred the Great as its founder. Some extravagant enthusiasts trace its beginnings back to Noah's time, pointing in their ancient college chapel to a quaint stained glass window which depicts the story of the master of the ark and, in the same scene, a vessel flying a flag bearing their college arms.

along the Isis, as Oxford chooses to call the part of the Thames River which flows by its doors. Here is the battleground for the greatest athletic rivalry the university knows.

As might be expected in the youth of a nation which has always manifested intense affection for the water, the chief sport at both of its greatest universities is rowing. There is football—a "rugger" football, which is quite distinct from our American game — soccer, sports (track events), hockey, tennis, croquet, boxing, lacrosse, and the inevitable cricket. Baseball, basketball, and gymnasium sports are unknown, except when groups of American or colonial students get together for exhibition contests.

The mild English winters enable athletes to practice outdoors almost every day in the year, and university lectures are arranged so that no classes are held between 1 and 5 o'clock. The entire afternoon is thus left free for outdoor recreation — almost a necessity in the damp, chilly climate.



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RIVALRY REACHES ITS HEIGHT IN THE ANNUAL OXFORD-CAMBRIDGE BOAT RACE

The two varsity eights have just passed under the Hammersmith Bridge, while a fleet of launches follows at a discreet distance. The course is on the Thames River from Putney to Mortlake, a distance of four and a quarter miles.

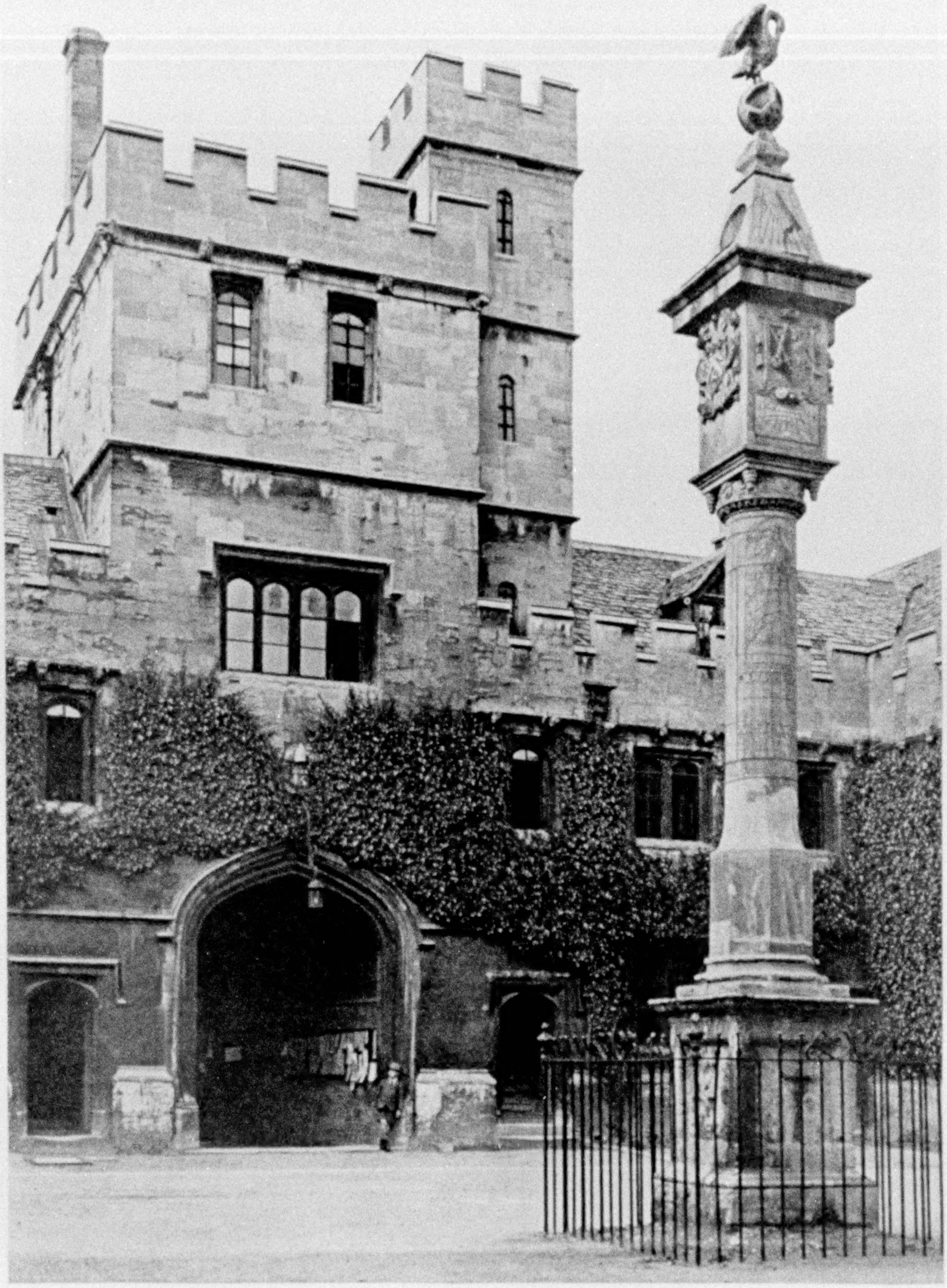
Rowing arouses all the enthusiasm and rivalry among English students that football does among our own. There is, however, rowing *and* rowing. While it is true that the annual Oxford-Cambridge crew race sometimes attracts as many as 150,000 spectators, it is a national rather than a varsity event; at least, it is as far as student interest goes. Many undergraduates of each university will not bother to go down to London in the early spring for the match, but no undergraduate not on the sick-list would miss the river events of Eights Week, in June, when the college crews compete.

In Eights Week, however, all the competition is confined to the crews of colleges within the universities, and each university holds the events on its own stretch of river. Varsity crews are then disbanded, and acclaim goes equally to the men who have won seats in the first or second eights of their colleges, whether they have been former varsity oarsmen or not.

In the annual race at London the crews compete much as do those of America. The two shells line up abreast, and the first to cross the finish line at Mortlake, four and a quarter miles from the starting point, is declared winner. It is a grilling endurance test. My chief recollection of it, however, was the ease with which I secured a place of vantage near the finish line. The English apparently do not concern themselves so much about the winner of the race as they do about the manner in which it is rowed.

BOAT CREWS RACE SINGLE-FILE

The first Eights Week crew race I witnessed proved very confusing. English university rivers—the Isis at Oxford, the Cam at Cambridge—are very narrow and have given rise to a distinctive form of racing unknown elsewhere. Unlike our Poughkeepsie and our Childs Cup races, or even the Oxford-Cambridge Varsity race, in which the competitors race abreast and the head boat at the finish line is winner, the English Eights Week races are rowed in two or three divisions, the first



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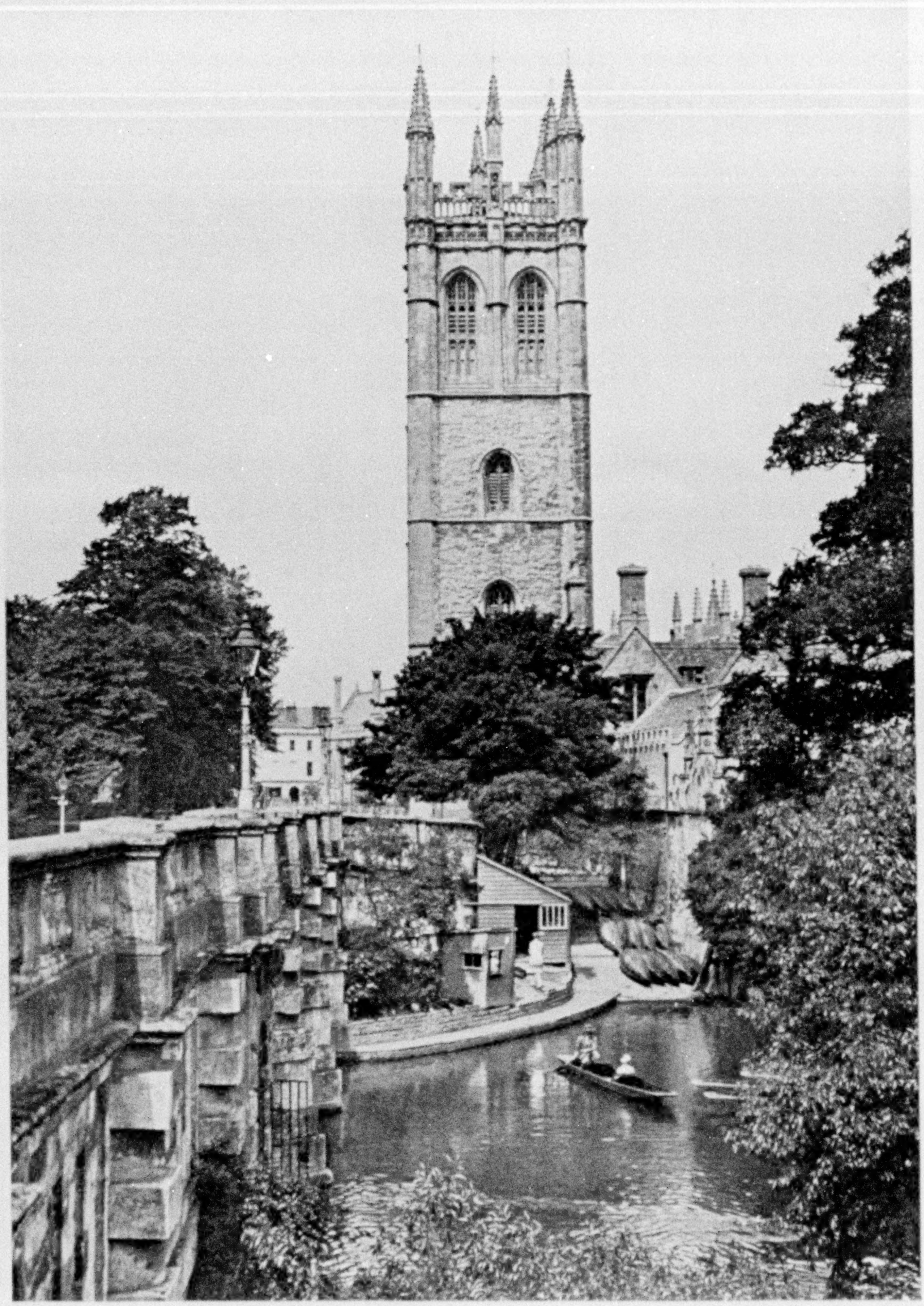
THE FRONT QUADRANGLE OF CORPUS CHRISTI IS FOUR CENTURIES OLD

Richard Foxe, Bishop of Winchester, founded Corpus Christi College in 1516-17, "to the praise and honor of God Almighty, the most holy body of Christ." In the foreground is the famous cylindrical sundial and perpetual calendar. Among the prominent members of this college was the philanthropist, General Oglethorpe, who established the Colony of Georgia.



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MAGDALEN'S BELL TOWER REVEALS MANY CHARMING ASPECTS

Each May Day, at 5 a. m., the college choir sings a Latin hymn from the top of this perfectly proportioned structure, and the bells peal forth a glad salute to approaching summer. The River Cherwell flows peacefully under Magdalen Bridge.

division starting latest in the day, and the boats in each division are strung out in a long single line, 150 feet apart.

The object of each boat in the race, with the exception of the head one, is to overtake and to "bump"—that is, to touch—some part of the boat ahead with the bow of its own. The head boat, which secures its exalted position owing to a victory in the preceding year, must keep away from all the boats behind or relinquish its place.

A "bump" is acknowledged by the coxswain raising his hand, which is done at once, not only for the sake of sportsmanship, but also for safety, for a stroke was once killed by the sharp prow of a pursuing boat. Prows are now covered with a gutta-percha knob, but accidents are still not unknown when signals are tardy. The two boats must then get out of the way of others, or the victor may itself be bumped by the next boat behind. If the boats succeed in getting out of the way without further bumps, the boat which has just scored a bump moves up one place in its division. The bumped boat loses a place.

Sensational advances are not possible. The races are held every afternoon for six days, and the very most any college can hope to advance in a single day is two places, or perhaps, by some miracle, three.

There is no judges' and coaches' boat. Oxford and Cambridge crews are all trained by volunteer former oarsmen, who devote a great deal of their time to this altruistic work.

All the colleges have eights, some of them more than one eight (two or more may be entered by each college); so if at least one crew of a college is not well up in the first division its chances of coming out at the head of the river that year are remote indeed.

"The ideal place for a very good boat for which the headship of the river is unattainable is No. 2 in the second division," one Oxford rowing authority claims. "The second division race being rowed earlier in the afternoon than the first, the boat may bump the leading boat of the second division and thus become the last boat in the first division.

"A boat thus placed is known as the 'sandwich boat.' Then, if it succeeds in making a bump in the first division, it will have made two bumps in one day and will have a chance of performing the extraordinary feat of going up seven places in six days' rowing, which can only be achieved by a boat which passes from a lower division to a higher. Of course, every man in every boat pulls for all he is worth and a bit more, but two bumps on the first day may give an élan to the crew of a value simply incalculable."

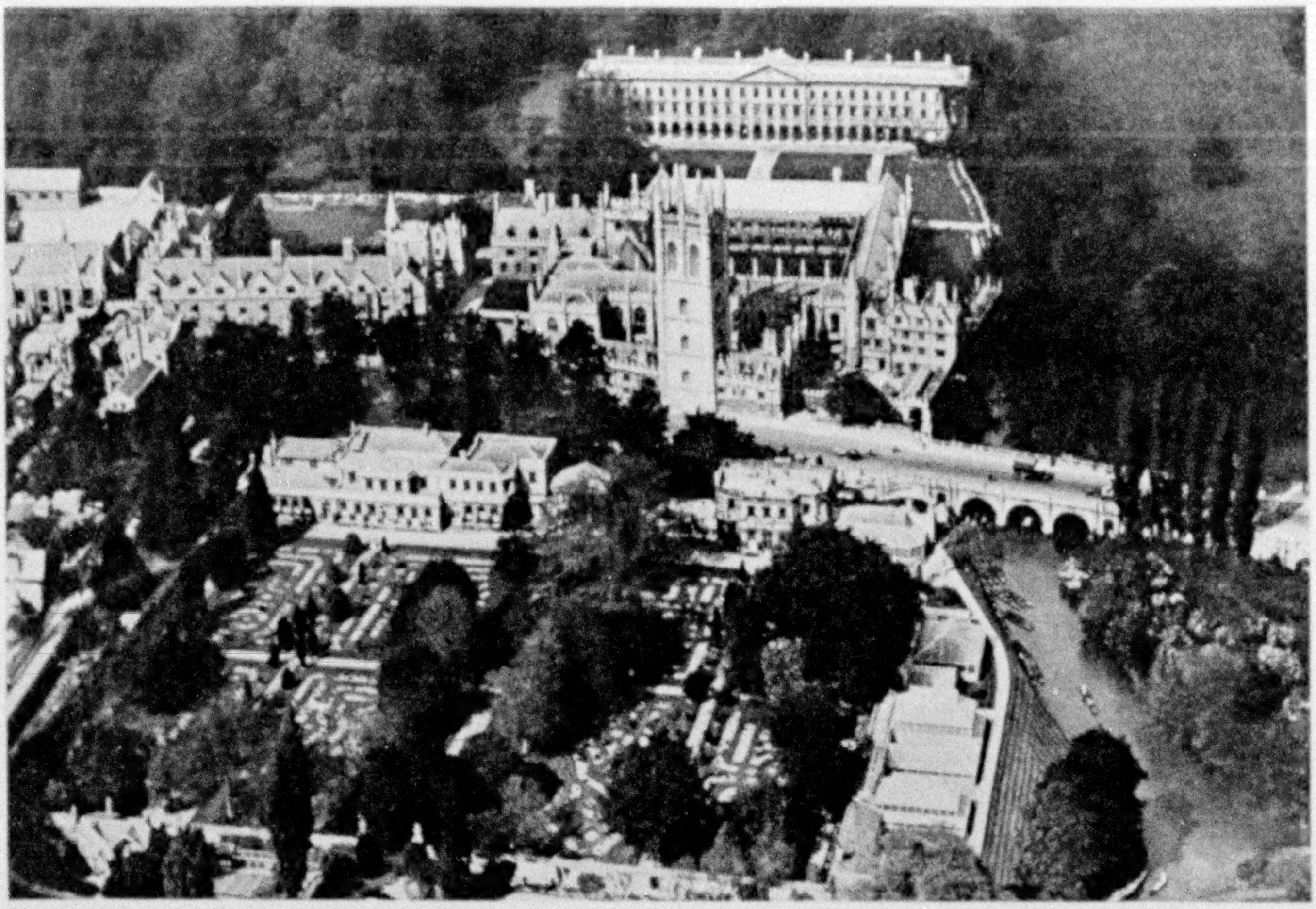
The "Torpids," as the races of a similar character in heavier boats are termed, serve as preliminary contests earlier in the year. The interval between boats is 30 feet greater than it is during Eights Week, when sliding-seat shells are used.

WHERE THE OXONIAN AIRS HIS SCORN OF THINGS OF GENERAL ACCLAIM

While Oxford has borne with somewhat of an air of diffidence its crown of thorns, proclaiming it to be the home of "Lost Causes"—Charles I, the Jacobite Reaction, the Methodists, the English Renaissance, the Classicists, etc., etc.—it is as a blight on accepted ones that young Oxford would rather be noticed, if at all. In the university (nonofficial) clubs, such as the Oxford Union, the Oxonian airs his scorn of things of general acclaim and accessibility.

Anyone in the university may join the Oxford Union—in fact, it is said that only the strong-minded can refrain from doing so, owing to the activity of college representatives of the club among the new men—and on Thursday nights a good part of the undergraduate body, including not a few dons, nonmembers, and guests, strolls down to the big auditorium, "the nursery of the House of Commons" it has been dubbed for a hundred years, to listen to debates on every conceivable subject.

The subject, however, is not important. The presence of most of the undergraduate spectators depends upon a few well-known student speakers with a gift for fluent epigram and witticisms (but not jokes) in the traditional Oxford manner. After these have spoken, most of the spectators file out one of the two doors, marked "Aye" and "No" respectively, and so indifferent is the average undergraduate about the outcome that he often chooses the least crowded door, and may even fail to ascertain the next day or the next week which way the division ran.



Photograph from Aërofilms Limited

MAGDALEN COLLEGE FROM THE AIR, WITH THE BOTANIC GARDEN IN THE FOREGROUND AND RIVER CHERWELL AT THE RIGHT

It has been claimed that many places in England and in other countries offer as good book learning as does Oxford; but the loyal Oxonian will tell you, if you press the matter, that the motto of Oxford University, "Dominus illuminatio mea," implies more than the "light" to be obtained from books and lectures; "for it is not only the walls and spires of Oxford that are 'frozen music,'" he will explain. "There is a frigidity of the heart that keeps its song inviolate. To be cool, casual, contemptuous—in a word, emotionless, with the innate remove of a Brahmin or a Samurai—that is Oxford!"

That, I think, is a bit extreme, but I could not help sensing that the Oxford "manner," if such a thing really exists, is one of nonenthusiasm and defensive nonchalance. The American instinct, for instance, to "start something," lead a reform movement, organize a fraternity system or a daily paper, or even to propose a college yell to "pep up" the place, falls of its own weight in so rarefied an atmosphere, not because such instincts are foreign to the Anglo-Saxon, but because Oxford is the well-nigh insoluble crystallization of centuries of trial and error, in the course of which almost every conceivable idea has been given a chance to prove itself.

Oxford has achieved that serenity of old age which counsels itself with the thought that not every new idea is a good idea; and, furthermore, there are no new ideas!

And yet the spirit of youth flourishes in the rich mold of this antiquity. The visitor sees it in the flushed and ruddy cheeks of the briskly walking scholar, his black gown fluttering behind him as he hurries to his class or tutorial. Back of professor's serious mien I believe I glimpsed a deeper optimism and a faith which have enabled this great seat of learning to come down through the ages undiminished in vitality, complacently unaffected, in the rôle of "the home of lost causes, and forsaken beliefs, and unpopular names, and impossible loyalties! . . . This Queen of Romance! . . . This Mother of Learning! . . ."

GENTLEMEN ADVENTURERS OF THE AIR

Many Regions of Canada's Vast Wilderness, Long Hidden Even from Fur Trappers, Are Now Revealed by Exploring Airmen

By J. A. Wilson

Author of "Canada from the Air," in the National Geographic Magazine

Illustrated with Photographs from the Royal Canadian Air Force

IN A Golden Age of centuries agone it was the Sea Hawk, daring, cutlass-rattling skipper of galleon or caravel, who careened over stormy, unknown seas to find strange lands of treasure and a life unlike any that Europe knew.

To-day, wiping out distance with wings, bold *skippers of the sky* spy out the last raw, empty regions of the world, as airmen are doing now in northern Canada. Here, breaking the silence of centuries, their planes drone and growl from Labrador to the Yukon, exploring a wilderness kingdom almost as large as the whole United States.

Just as daring their air cruises are as any sea voyage of old, when a golden palace of the Incas or fabled Seven Cities of Cíbola was the goal. Just as interesting, too, and full of exciting surprises, and far more profitable; for, in place of men in coats of mail, armed with crossbow or primitive arquebus, they carry engineers and geologists armed with scientific instruments, miners with picks, and cooks with pots and pans—and plenty of food, tents, tools, and camp supplies for the economic conquest of this new Eldorado.

Since the World War, airplanes have perhaps done more to open up and reveal the undeveloped wealth of northern Canada than men on foot, in canoes, or on dog sleds had done in the previous three centuries. By yet another comparison, the airplane now does for this wilderness of the far north what pony-express riders and ox-team freighters did for the golden West of the United States before railways crossed the Plains. In one year a certain Canadian air line carried 122,000 pounds of mail, 1,200,000 pounds of freight, and about 10,000 passengers!

Prosaic? Merely a truck driver's life after all, hauling freight and passengers over clouds instead of up and down hills? Not in that vast, untouched expanse, where man now makes his last great struggle on this continent to wrest fortune from a virgin mineral region! Hurtling over herds of staring caribou; startling the placid moose; now and then glimpsing even the savage grizzly roaming along the ridges, Canadian airmen may look down on hills and valleys where no man's foot, not even an Indian's, has ever been planted,—flying above a Garden of Eden, as it were, although a rather cold garden at times, before man was made and set in it.

LITTLE KNOWN OF GREAT NORTHERN EMPIRE

For northern Canada, despite its proximity to civilization, remained almost a sealed book till airmen explored it. The Cabots came, of course, 400 years ago; then Frobisher, exploring its coasts; Davis, and Henry Hudson. Then came that great group of gentlemen traders—magnificent, enduring monument to the continuity of British commerce—the Hudson's Bay Company. Long before airplanes, Canada's general outline was known and her main waterways were explored and used. They were the familiar routes of fur traders and trappers, whose industry is still of great importance. But the vast interior itself, that still almost trackless region which stretches from the northernmost settlements poleward, had, till a very few years ago, been seen by no white men at all.

But now industrial Canada faces north. She seeks to roll back her wilderness frontier and double her productive area.

PROSPECTORS BRAVE THE NORTH AT ITS WORST

Winter bites deep in the Richmond Gulf country in January, but these hardy miners carry on despite snow and cold.

PIONEER DAYS STILL LIVE IN CANADA'S LAST FRONTIER

These Chippewaian Indian trappers of the Reindeer Lake district in Manitoba have brought their winter's harvest of pelts to sell to the Hudson's Bay Company at Brochet. The trade goes on here much as it did in the time of Frontenac, but now airplanes carry the furs to market, saving months in time of transportation (see text, page 633).

Up to Hudson Bay a railroad is driving, to shorten the water haul of wheat to Europe.

Already, as the world of mining well knows, tremendous development is under way in that great pre-Cambrian shield, 95 per cent of which lies in Canada. Though as yet barely scratched, it has brought forth the famous Cobalt silver camp; the great copper-nickel field at Sudbury; gold mines of Kirkland Lake and Timmins district; the Rouyn field in northwest Quebec; Chibougamau, northeast of Lake St. John; the Flin-Flon and Sherritt-Gordon mines of northern Manitoba, with their hundred miles of railway into northern wastes, as well as kindred activities in north Saskatchewan and down the Mackenzie basin (see map, page 600).

Copper, gold, silver, nickel, zinc—these are the minerals which lure the Canadian prospector ever and ever farther north. From Montreal, from Toronto or Winnipeg, miners by the hundreds start by rail. At railway's end, or in such places as The Pas, in Manitoba, or Hudson and Sioux Lookout, in Ontario, airplanes wait to take men farther north.

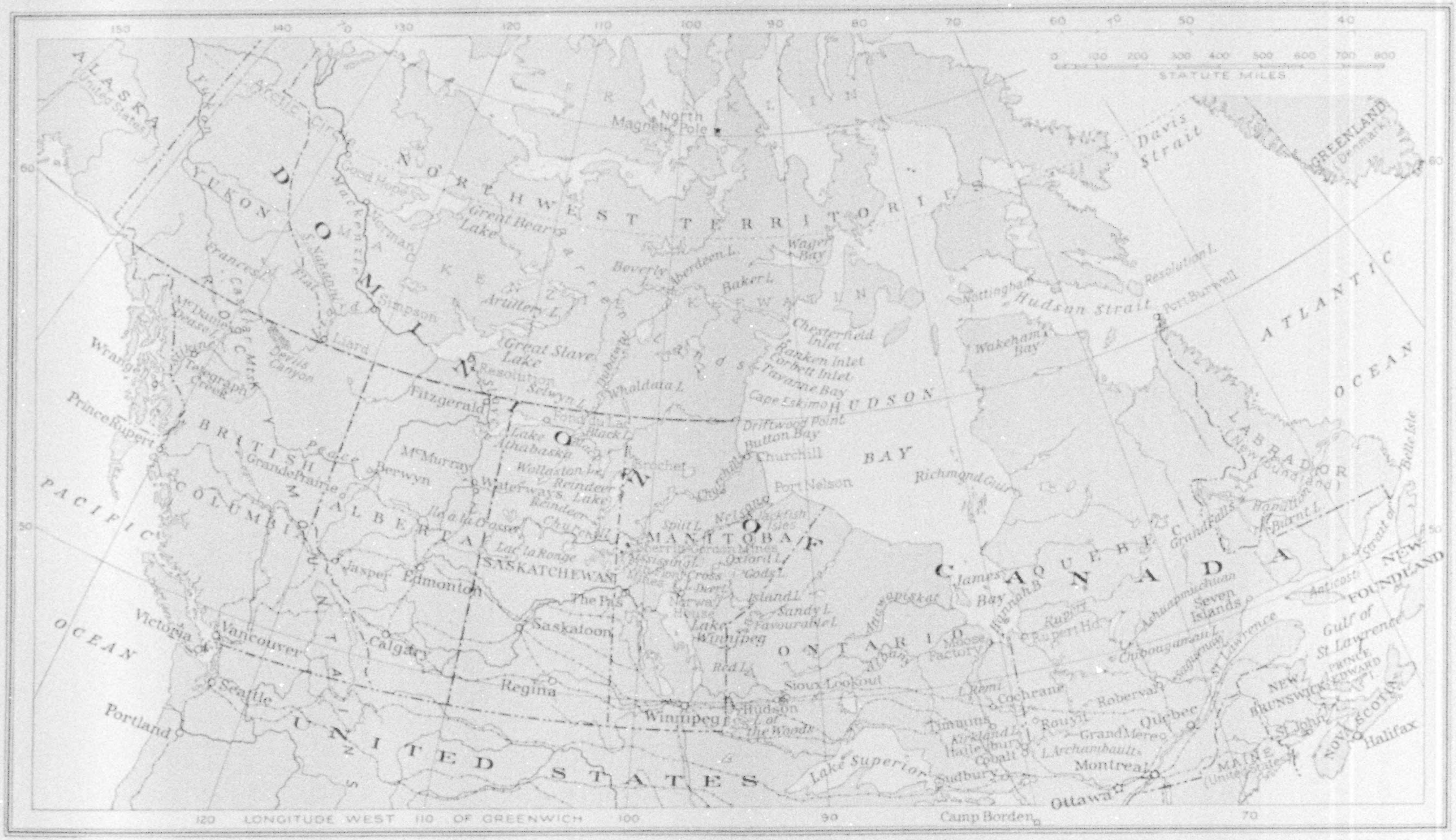
From "the end of steel," before airplanes came, it took weary weeks to reach many of these regions, known now to be rich in minerals, in forests, and in potential water power. Now, barring mixups with blizzards, one may fly from New York, Montreal, Minneapolis, or Seattle to these new fields of wealth in two days. Using the frozen lakes as landing fields and "picking his weather," the Canadian airman faces "40 below" as calmly as a Florida pilot takes off in eternal sunshine.

NATIVES CHERISH DOGS AS THEIR BEST FRIENDS

These woolly puppies are more than pets to the girl of Wakeham Bay, for when they have attained full growth they will help draw the sleds that are the only means of transportation for eight or nine months of each year. Without them the tribes of the north would perhaps soon perish.

AIR TRANSPORT WELL ORGANIZED

Few people, except those who have seen it, realize the high degree to which northern Canada has organized its air transport. Using water routes, open in summer, it has laid down a wide network of fuel and supply stations at strategic points. All around Hudson Bay, at convenient spots; down the Mackenzie River


STATUTE MILES
ALASKA (United States)
YUKON
DOMINION OF CANADA
NORTHWEST TERRITORIES
Magnetic North Pole
Great Bear Lake
Great Slave Lake
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
LABRADOR (Newfoundland)
NEWFOUNDLAND
NEW BRUNSWICK
NOVA SCOTIA
PRINCE EDWARD I.
MAINE (United States)
GREENLAND (Denmark)
Davis Strait
Hudson Strait
HUDSON BAY
James Bay
ATLANTIC OCEAN
PACIFIC OCEAN
UNITED STATES
Gulf of St Lawrence
Lake Superior
Lake Winnipeg
Prince Rupert
Vancouver
Victoria
Seattle
Portland
Jasper
Edmonton
Calgary
Saskatoon
Regina
Winnipeg
The Pas
Churchill
Port Nelson
Sioux Lookout
Cochrane
Sudbury
Ottawa
Montreal
Quebec
Halifax
St John
Camp Borden
LONGITUDE WEST 110 OF GREENWICH

Drawn by Charles E. Riddiford

AIRCRAFT ARE MAKING POSSIBLE DEVELOPMENT OF EVEN THE REMOTE CORNERS OF CANADA'S VAST DOMAIN

ONLY THE AIRMAN VISIONS THE FULL SWEEP OF NORTHERN QUEBEC

Inhospitable stretches that until recently meant weeks or even months of toil to men on foot are now conquered in a few hours by light seaplanes. A Fairchild Wasp is shown here carrying photographic equipment over broken country.

FLYERS OFTEN GO TO THE AID OF SNOW-BOUND MINERS

Airmen of the Northern Aërial Minerals Exploration flew 2,000 miles in the dead of winter to pick up a prospecting party at Richmond Gulf (see text, page 624). A pilot and a member of the mining group are shown here with one of the two monoplanes used on the trip.

to Lake Athabaska; about Great Slave and Great Bear lakes and along the Arctic coast, and down the Yukon, these depots are set up. Now practically every district in continental Canada is within flying range of one of these stations. In fact, if you picture the Canadian airways as linked up with the air net in the United States, the broad statement is true, given good weather, that no place on the North American Continent is now more than one or two days' flight from a railway.

It was in survey work and in patrols of her millions of acres of forest reserves that Canada first used planes.* The first attempt to use a plane on a long-distance commercial mission was made by an oil company in 1921. To meet an emergency, they started two all-metal monoplanes, on skis, from the railhead at Peace River on a 1,200-mile flight to Norman, on the Mackenzie River. The weather was vile; blizzards with temperatures of 40 and 50 below zero alternated with mild spring thaws.

EMERGENCY REPAIRS EFFECTED

One plane, landing on crusted snow, at Simpson, broke through so that a ski collapsed and a propeller blade struck the ground. But the resourcefulness of Canadian pilots, in a smash, far from shops and spare-part stores, is revealed in Pilot Gorman's laconic report on this accident:

"March 30. . . . Will try and have a new 'prop' made here. Oak sleigh boards are available; also some glue. And a Hudson's Bay Company man named Johnson is an old cabinetmaker. . . . We can use the damaged propeller as a pattern and use the Catholic Mission workshops here.

"March 31. . . . Found moosehide glue. . . . Borrowed some boat clamps, so that the boards can be clamped tightly together in making the laminated propeller.

"April 15. Tested the new propeller. It works satisfactorily."

The amazing degree to which planes now wipe out miles and save time in Canada was shown by flights and photography work carried on from a base on the north shore of the Gulf of St. Lawrence. From this stormy coast Capt. Vernon ("Turk") Robinson made flight after flight, bearing surveyors and supplies over a mountainous coast line into the interior

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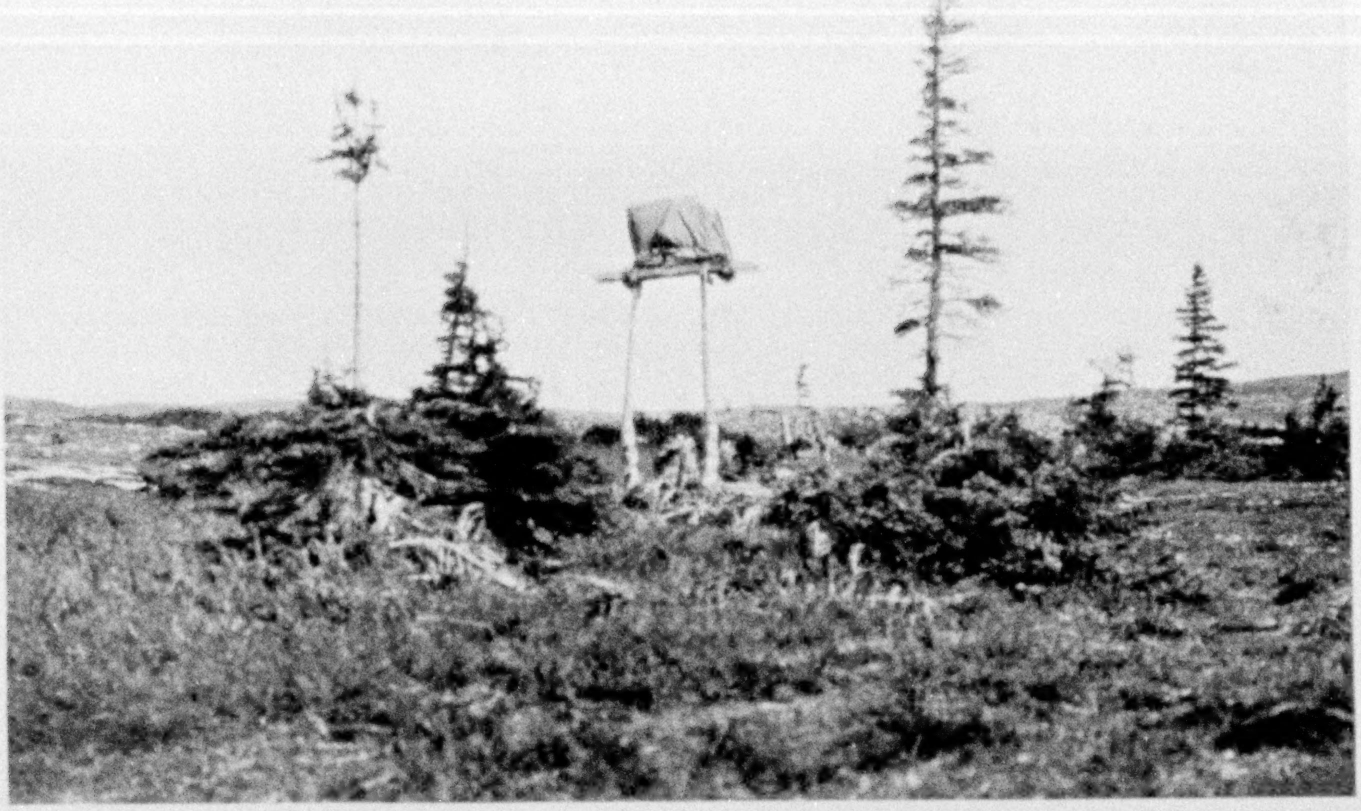
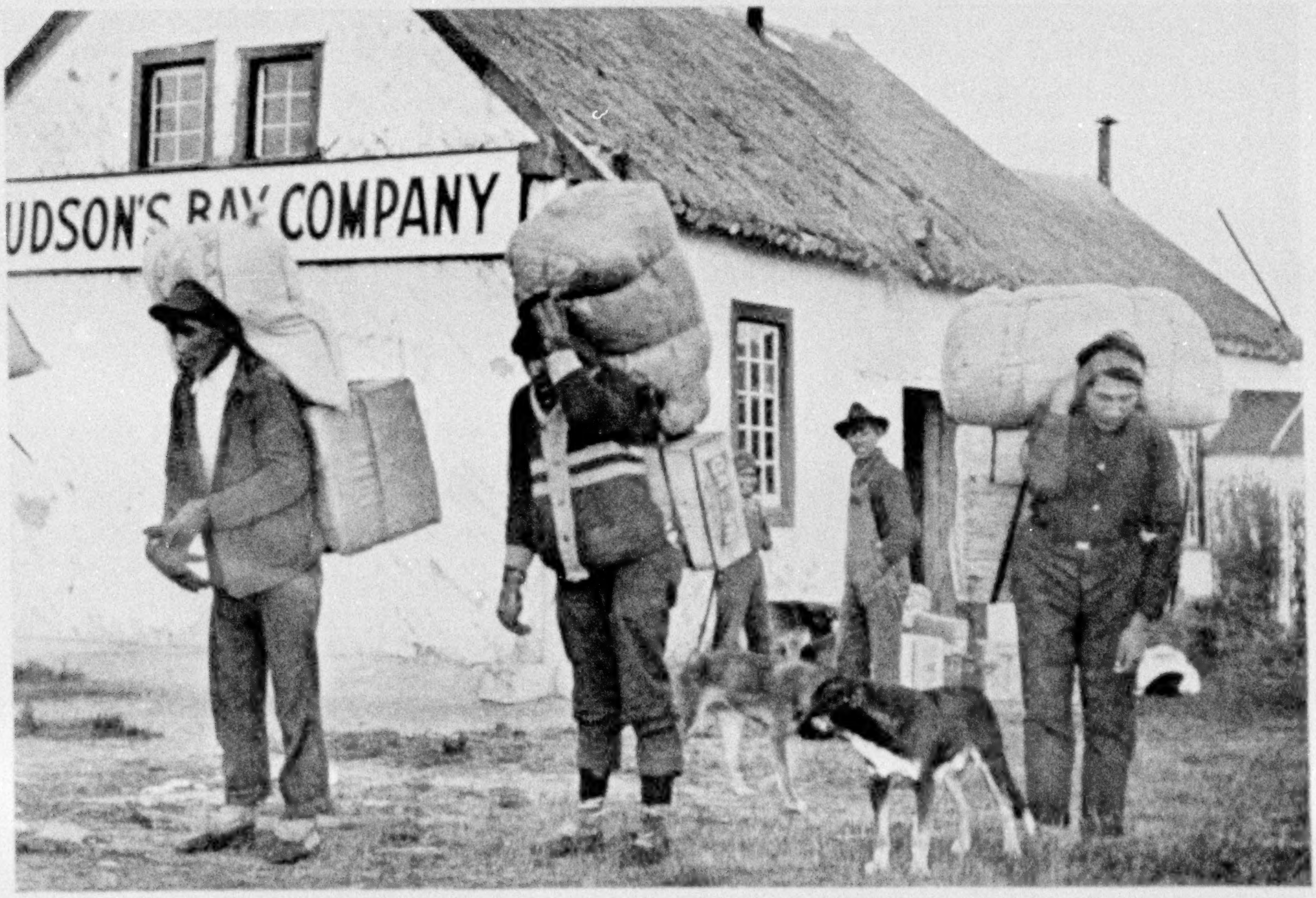
*See, also, "Canada from the Air: Flights Aggregating 10,000 Miles Reveal the Marvelous Scenic Beauties and Amazing Natural Resources of the Dominion," by J. A. Wilson, in the NATIONAL GEOGRAPHIC MAGAZINE for October, 1926.



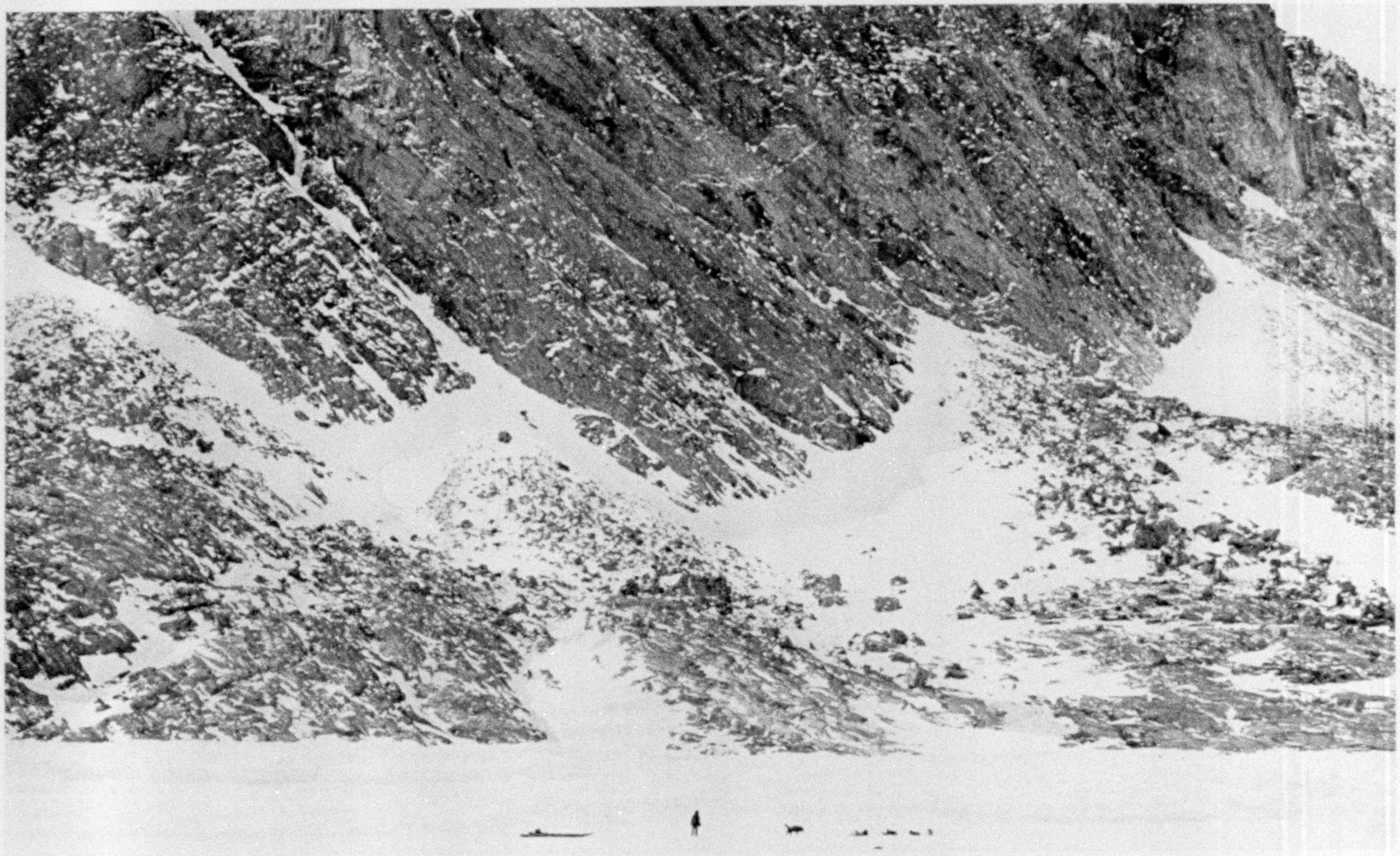
PROVISION CACHES REST ON STRIPPED POLES

Where storage underground is impossible because of the iron hardness of the frozen soil, the winter food supply must be placed above the reach of prowling animals. This open-air larder stands among the last trees on the edge of the Barren Lands of the Mackenzie District.



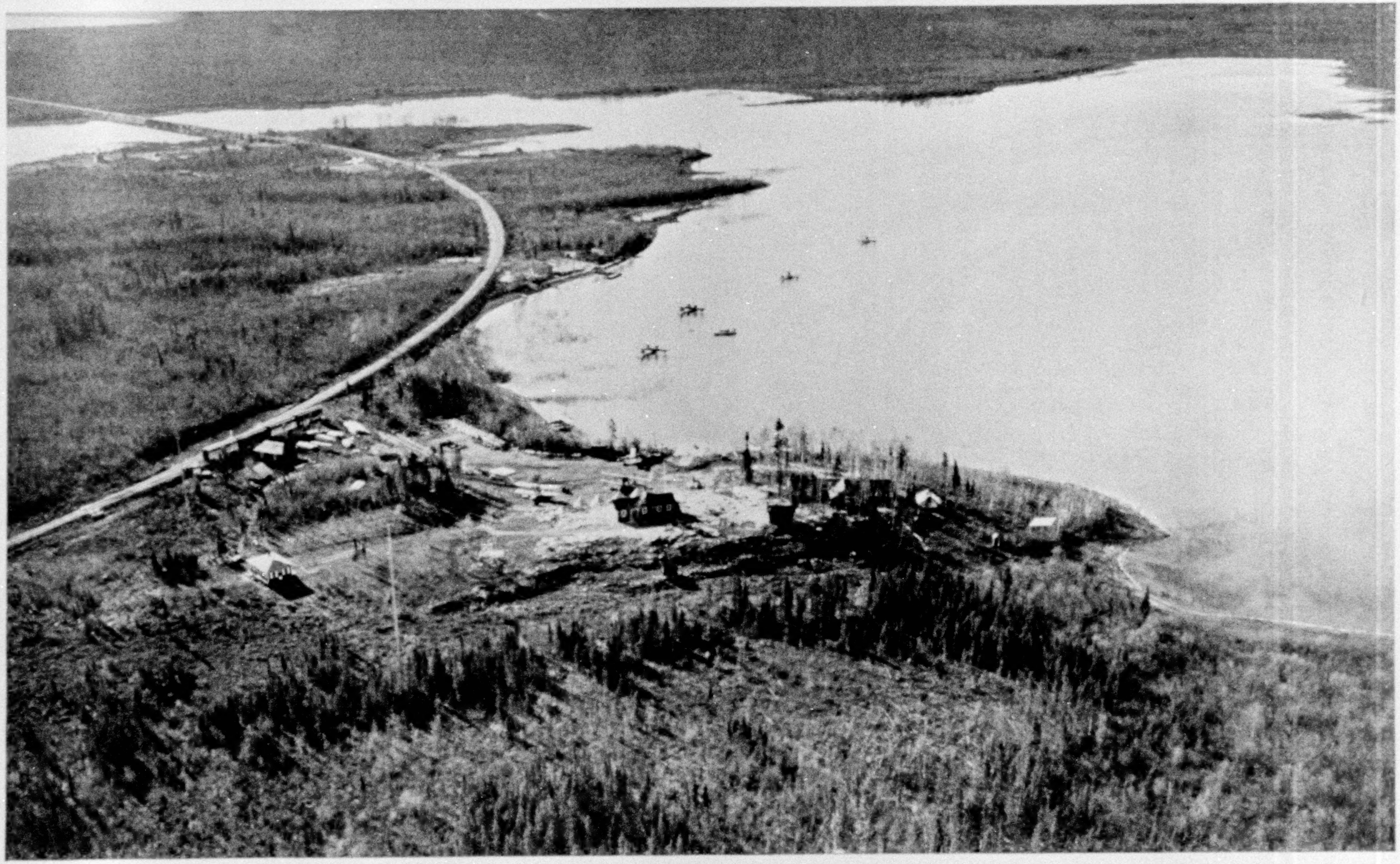
PACKING IS BACK-BREAKING TOIL AT BROCHET

Before the advent of flying in Manitoba supplies had to be transported by man power many weary leagues to the Hudson's Bay post on Reindeer Lake. To-day the goods are brought in by airplane, and the Indian carriers endure the torture of the tumpline for comparatively short distances.



THE SHORELINE OF WAKEHAM BAY LOOKS INHOSPITABLE

Country like this is characteristic along Hudson Strait. It virtually defied exploration until the advent of the seaplane.



RAILWAY AND AIRLINES CONNECT AT CORMORANT LAKE

From this station of the Royal Canadian Air Force, north of The Pas, planes carry supplies to the newly opened mining area of Manitoba. The place is also a fire patrol and survey base.

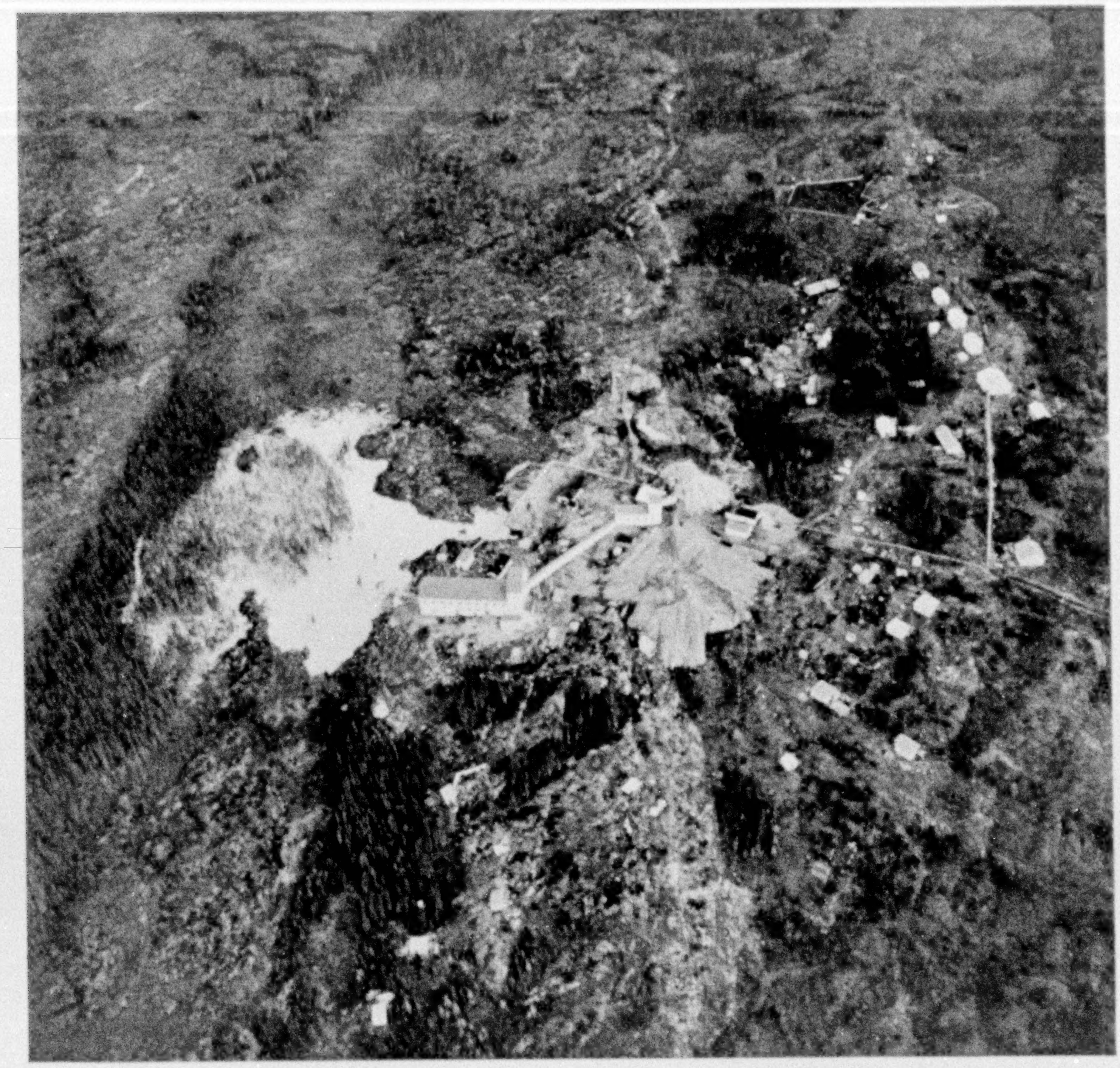
MANY AIRLINES GO OUT FROM THE PAS

This thriving city of Manitoba is the jumping-off place for planes flying with supplies and passengers to the rich mining fields of the hitherto inaccessible lands to the north.

plateau. He carried drums of gas by air, making caches at points far distant; from these deposits planes could operate even farther inland. Thus Grand Falls, on the Hamilton River, was finally reached. Then, after a day's flight of 800 miles, starting from Burnt Lake, photographs were taken of the falls; and the next day the engineer-photographer was back in Quebec having his pictures developed. By sea and canoe, the only other means of travel, this task would have taken all summer!

Adventure, grim and perilous, is often the lot of pilots and passengers in flight over the long stretches of empty wilderness which intervene between fuel caches, camps, or settlements.

One party, from a base on the inhospitable Gulf of St. Lawrence, was forced down by bad weather and had to alight on an unknown lake. A floating log ripped the bottom from their hull and the flying boat sank. Casting aside their clothing, the crew swam for the shore. They made land minus any food or equipment, and spent a week, naked, in the woods, in the midst of the black-fly season. The days were blazing hot, but the nights freezing cold. Two men, badly hurt in the crash, reached the shore only with the greatest difficulty.



INDUSTRY THRIVES WHERE WILDERNESS WAS KING

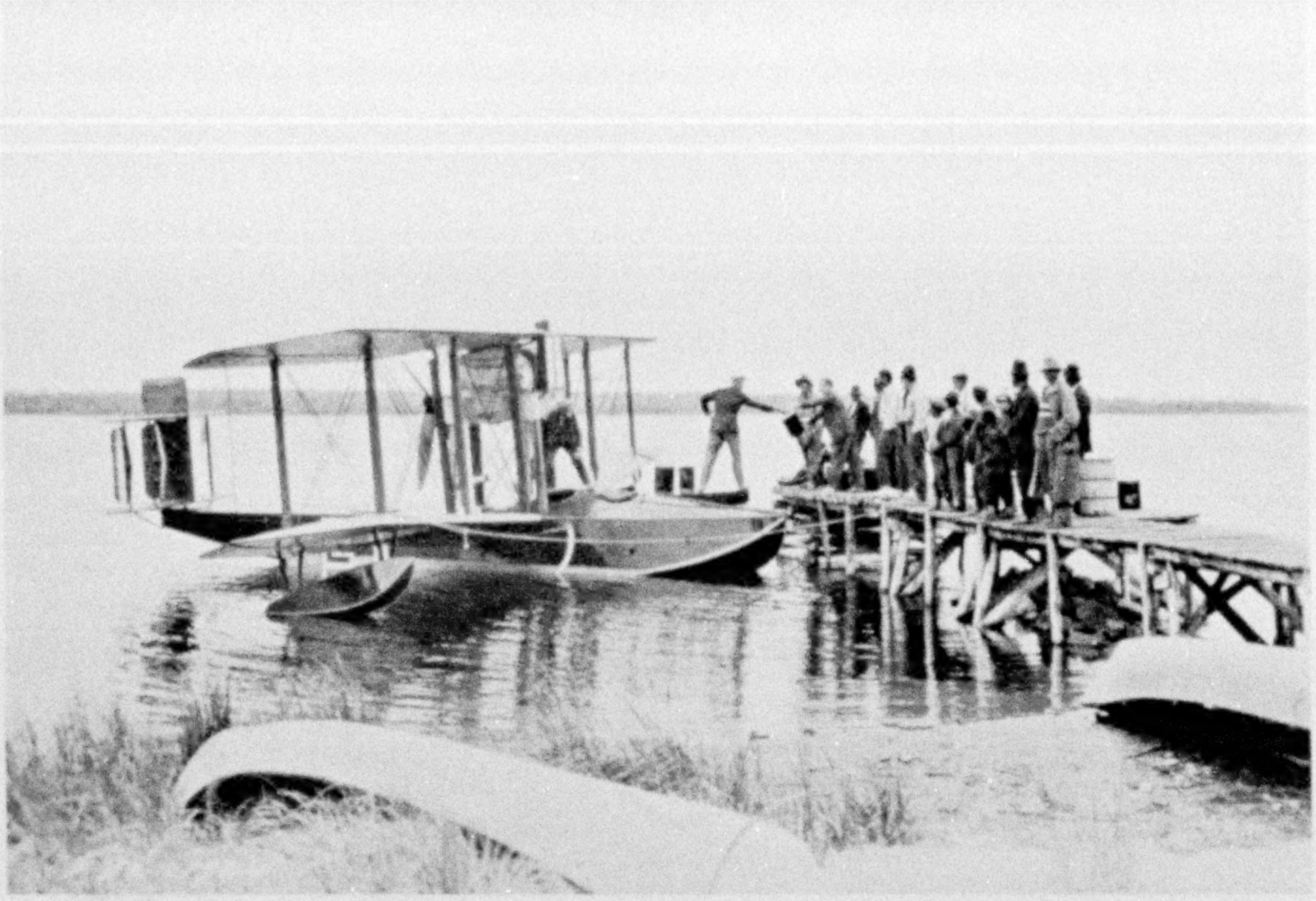
An air view of the shaft head of Central Manitoba Mines at Long Lake, near Lake Winnipeg, shows the remarkable development now under way in this rugged district.

Happily, however, in the party was a land surveyor, who managed to swim ashore with a hand ax and a water-tight box of matches. Using his ax, he made a rude shelter. By snaring rabbits in the woods and killing frogs with sticks, the party kept alive for seven days, till rescued by another flying boat sent to seek them.

The search for the lost French flyers, Coli and Nungesser, in May, 1927, nearly cost the lives of Captain Robinson and his crew. They had flown along the north shore as far as the Strait of Belle Isle, then still full of ice, when a storm forced them down. Anchoring late in the evening, in the shelter of a rocky ledge, they curled up in their cockpit to await better weather. Suddenly the wind veered, blowing a gale from the open sea. Their anchor dragged and their ship smashed on the rocks. They saved their emergency kits, made a fire on shore from the wreckage of their plane, and cooked breakfast. Then they walked 20 miles along the beach, to a lighthouse and signal station, to report their whereabouts.

FLYING A SIX-DAY CANOE JOURNEY IN HALF AN HOUR

Returning from a flight up the Ashuapmuchuan River, one pilot brought with



BROCHET SERVES A THRIVING TRAFFIC

Although this airport on Reindeer Lake lacks the latest improvements, it is an important supply base. The plane tied to the pier is refueling for a flight into the empty lands of northern Manitoba.

him an old Indian. When invited to ride, the red man seemed in no way perturbed at the prospect. He calmly donned helmet and goggles and settled himself in the front cockpit, as if flying were an everyday act with him. In a half hour he flew downstream a distance which just previously it had taken him six days to cover by canoe.

On landing he climbed out, stretched himself, and said to the pilot:

"*Bon canot!* How much him cost?"

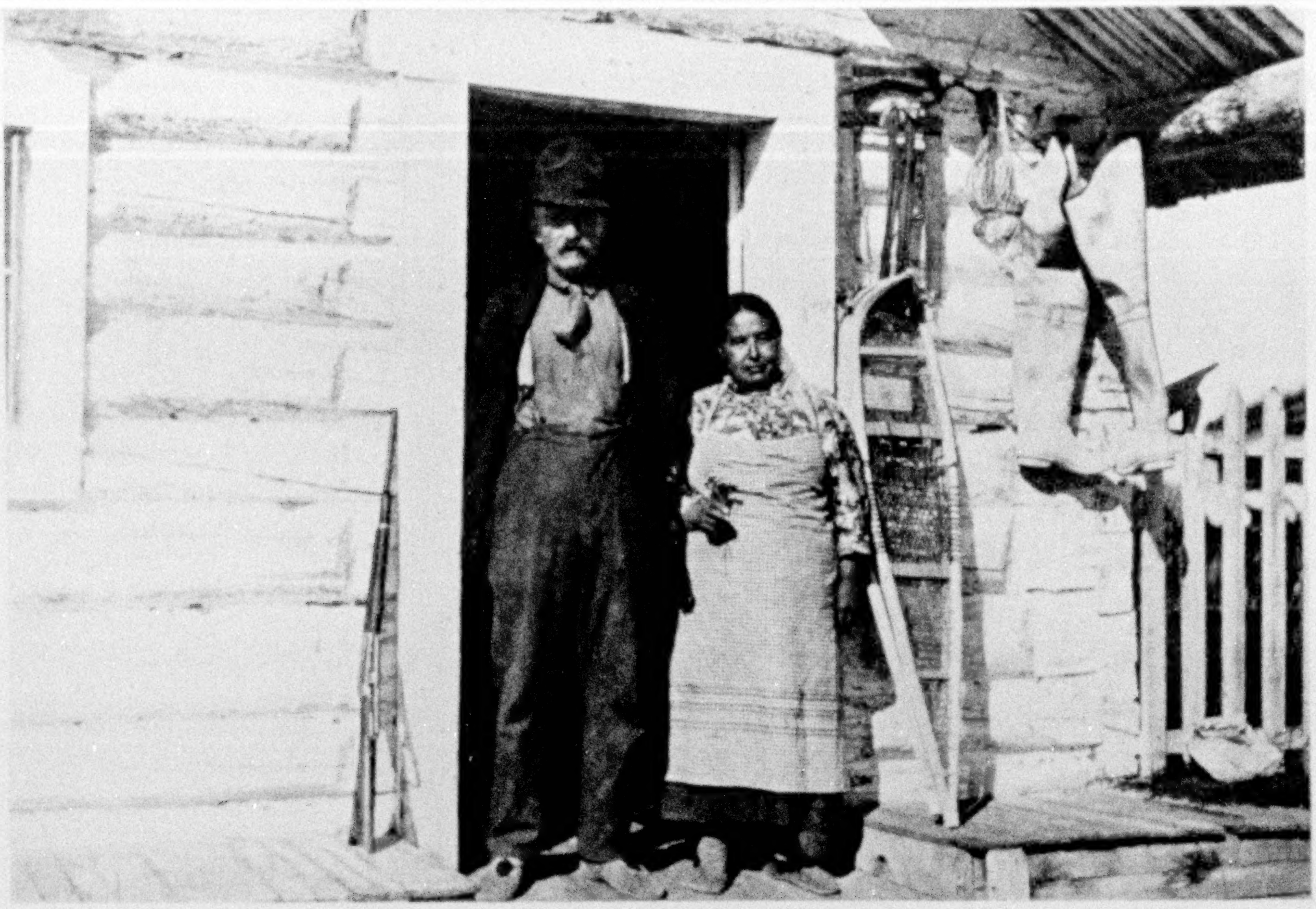
That Indian saw the advantage of air travel in the north country. Undoubtedly he graphically pictured to himself what paddlework he could save for himself and family in their long annual canoe trips to their hunting grounds, if they owned such a "bon canot"!

In north Quebec, flying goes on summer and winter.

On a January morning Capt. Kenneth Saunders, chief pilot of the Canadian Fairchild Company, started north with an engineer and a Hudson's Bay Company official, on a visit to some of the northern trading posts. Unless one flies, it usually takes six weeks of mushing on snowshoes, with a dog team to haul baggage, to reach these wilderness outposts. Regions between posts are wholly uninhabited. Snow lies from four to six feet deep; trails, such as they are, usually follow the lakes and rivers, through a broken country of small timber.

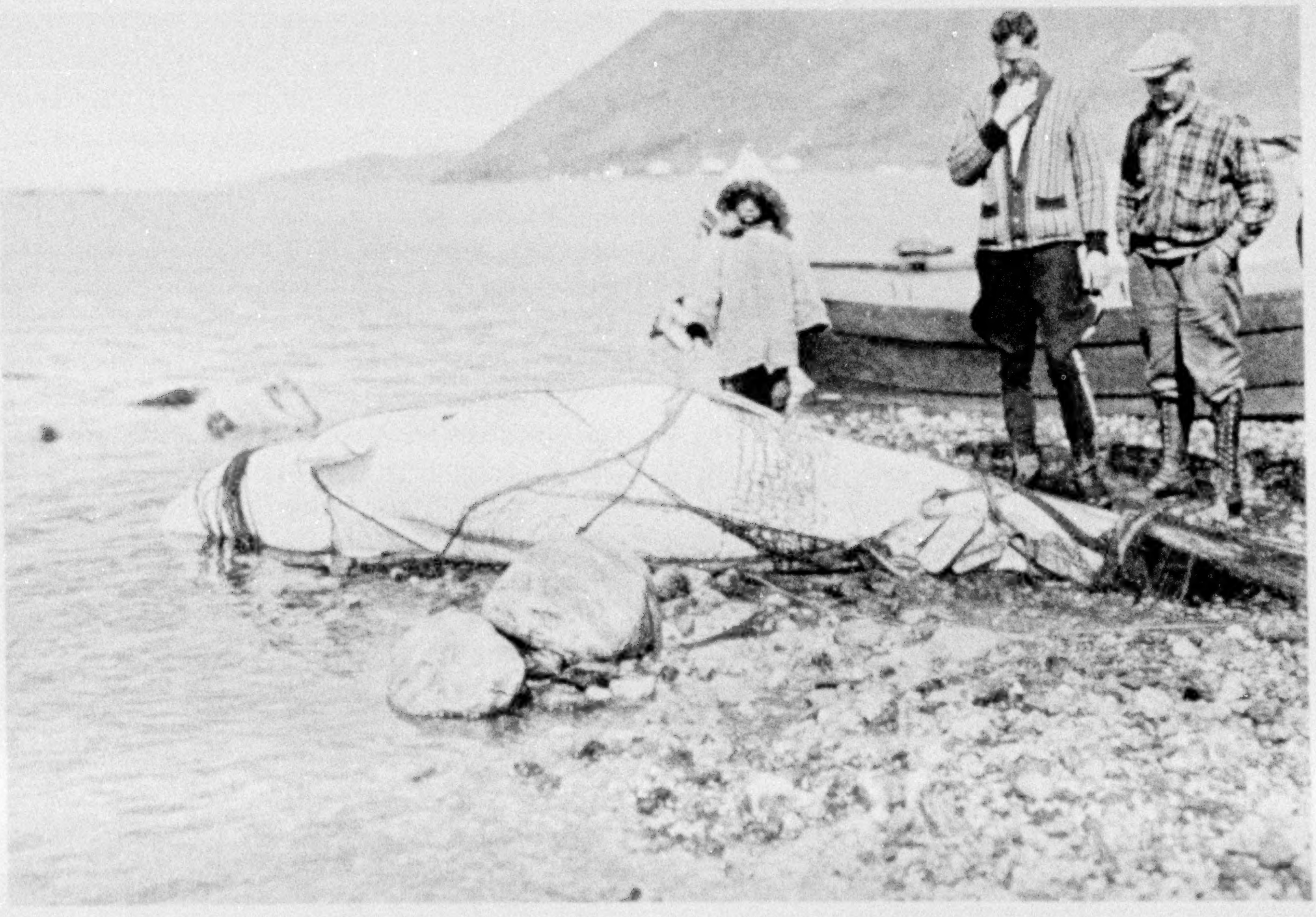
When Saunders and party left Roberval the day was bright and fair, but the thermometer was 25 below. An hour up the Ashuapmuchuan they sighted the first trading post and circled to land on the frozen river. Either they struck a spot where a warm spring had thawed the ice or else an early fall of snow on this ice had prevented a thicker formation; anyway, the plane broke through. The men had barely time to crawl from the cabin before the whole fuselage was under water.

Luckily, they were near the post, and Tom Moar, the Indian in charge, volunteered to walk out the hundred miles to civilization with a message. He started



LURE OF THE NORTH GETS INTO MEN'S BLOOD

The Hudson's Bay factor who stands at the door of his cabin with his Indian wife has lived for 15 years at Liard, one of the farthest outposts of civilization, and disclaims any desire to return to settled country. His early home was in one of the Dakotas.



SALMON NETS SOMETIMES SNARE BIG GAME

To the Eskimo boy of Hudson Strait, the beluga seems a great prize, though it has played havoc with the fishing equipment. The flesh of this small white whale is considered a delicacy by the natives of the north.

THE CORMORANT LAKE SPECIAL OFFERS THRILLS AND CHILLS

Transportation on the Hudson Bay Railway in northern Manitoba seems somewhat primitive, but it is a vast improvement over the pack-train methods of only a few years ago.

away within half an hour, taking only an ax, some matches, and a chunk of moose meat. He made the trip in the record time of five days, sleeping twice, on the second and fourth nights, in a hole in the snow lined with balsam boughs, and traveling continuously the rest of the time.

RAISING PLANE PRESENTS KNOTTY PROBLEMS

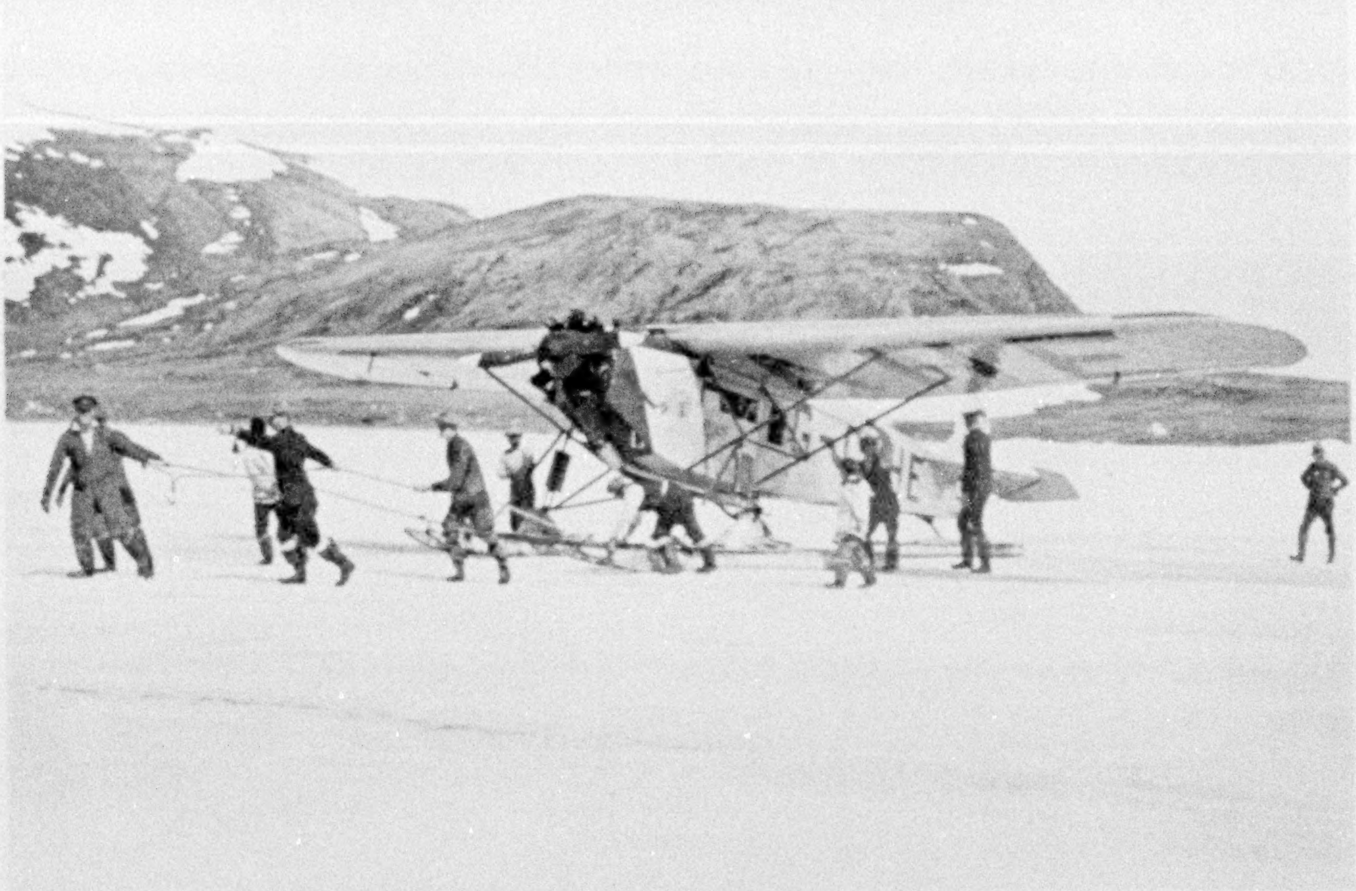
Meantime the Canadians set about salvaging their plane. They made a platform of logs around the machine on which to work. As the water was not deep, a tripod of poles cut from the woods was built over the aircraft and its wings were removed.

Seven days later a rescue machine reached the scene with hoisting tackle and tools. The wrecked plane was moved safely to shore. A tent was erected around the front of the fuselage and the engine, which was a solid mass of ice. This ice was chopped out, and then a stove was lit in the tent and gradually the cabin and engine thawed out (see page 636).

The metal propeller, badly bent, was straightened and the engine reassembled. The carburetor, though frozen in a solid block of ice for eight days, again worked perfectly.

On the 6th of February the plane was again ready for flight. Accompanied by the rescue machine, which had made several trips to ferry in gas, provisions, and little gifts for Mrs. Moar and her family (on whose hospitality the crew had been dependent during the salvage operations), it took off safely and flew back to Roberval.

Northern British Columbia is as inaccessible a country as can be found on this continent. Cut off from the Pacific by the panhandle of Alaska, with its coastal mountains and glaciers, it can be reached only by the Stikine, the Peace, or the Liard rivers and their tributaries. The Cassiar, as the district is called, teems with game, and, like all British Columbia, has been for the last 75 years the happy hunting ground of the prospector. Placer gold claims have been worked on many of its streams since the days following the gold strike of '49 in California. The country is now deserted, though undoubtedly



WHEN LANDING IS MADE ON SOFT ICE, EVERYBODY TOWS

For winter flying, seaplanes are equipped with skis instead of pontoons, and sometimes the lakes are not frozen hard enough to support the runners (see text, page 624). This craft got into difficulty on Wakeham Bay while the Hudson Strait Expedition was there, in June, 1928 (see text, page 642).

pay dirt still can be found on many creeks and bars. One hears many stories of lost mines and mystery valleys rich in hidden gold. The scattered Indian population lives by trapping beaver, lynx, marten, wolf, fisher, otter, ermine, wolverine, and fox, all of which are plentiful.

MARVELOUS SCENERY UNFOLDS TO AIR TRAVELERS

In 1925 a successful expedition into the Cassiar and still farther north across the Yukon boundary was organized by Lieut. Col. J. Scott-Williams.

Because this expedition of "flying miners" reveals so dramatically how air travel speeds up industrial activities in northern Canada, the narrative of the Williams party is worth detailing.

He had with him an assistant pilot and three geologists. The latter were hardened prospectors, with a reputation, according to Williams, of being able "to live indefinitely on a rag soaked in moose grease." Three young men, sons of one of the geologists, completed the party.

Their amphibian, rigged at Prince Rupert, was flown up the Pacific coast to Wrangell. Thence it flew over the Coast Range and up the Stikine Valley for 160 miles, to Telegraph Creek.

Staggering scenery slips past on this flight—snow-clad mountains, their lower slopes covered with some of the finest timber in the world, with huge glaciers wedged in high valleys; then the fast-running Stikine, with its many dangerous canyons, in the coastal region. But such terrain makes bad landings for flying boats.

Delayed for days at Telegraph Creek, awaiting the break-up of ice in Dease Lake, its main base, it was not till June 3 that the party was able to leave civilization for the north. Then the outfit of eight men, tents, and other equipment was safely conveyed to the head of Dease Lake over a country devoid of any landing place.

As Dease Lake is 2,500 feet above sea level, it was necessary to discard the amphibian's wheels, owing to the heavy loads carried, and use her as a boat only. From the lake the party then flew 90 miles far-

A LANDING LAKE LIES NEAR THE HEADWATERS OF THE NAHANNI

Here is the "land where the mountains are nameless and the rivers all run God knows where." Captain Oaks took a party of prospectors into this virtually unknown country, on the border between the Yukon and Northwest Territories (see text, page 623).

ther north, a 12-day trip by canoe, but 50 minutes only in the air, to McDame's, a Hudson's Bay post. Miners dredge for gold in the creeks of the vicinity.

Here Williams chartered a 5-ton scow and had it brought to the head of Dease Lake, where it was loaded with gasoline, supplies, and equipment and sent down the river to Liard, a 20-day trip, to establish an advance base there. While the scow was en route the geologists prospected around McDame's and Dease Lake, going and coming by air (see page 623).

July 5 they moved on to Liard base. Their plane's arrival caused great excitement. Natives fired a *feu de joie*, and in his excitement one shot a 30-30 through the plane's hull, just back of the gas tanks, causing a fountain to shoot up through the hole.

For two weeks the plane ran excursions within a radius of 250 miles of the post, the geologists landing here and there to explore. On one occasion Williams carried seven men, provisions and supplies to last a month, including tents and mining equipment, a distance of 200 miles, over absolutely virgin country, with no trace of human habitation.

VAST REGIONS ARE ENTIRELY UNPOPULATED

In August a flight was made from the main base at Dease Lake to Frances Lake, a distance of 310 miles, and about 130 miles north of the Yukon-British Columbia boundary. No white men or Indians were found living at Frances Lake, though there were the remains of an old Hudson's Bay post on the shore. The whole district teems with game. There are moose by the dozen on the shores of small lakes, while on the ridges of the mountain caribou, goats, and grizzly bears can be seen at almost any time. In captivity, at the Hudson's Bay post, there is a white moose caught thereabouts. Indians say that these freaks are fairly common in the district. White beaver and white bear are also frequently seen. Much merchantable timber stands in the rolling country between Cassiar and the Rocky Mountain ranges.

A MERRY HEART KNOWS NO WINTER

Golf at Wakeham Bay offers snow hazards even on the fairways, but the sand traps are harmless under several feet of ice.

NEWS FROM "OUTSIDE" GOES NORTH BY AIR

This monoplane of the Western Canada Airways made the first flight with mail from McMurray to Simpson.

SHELTERED COVES PROVIDE SANCTUARY

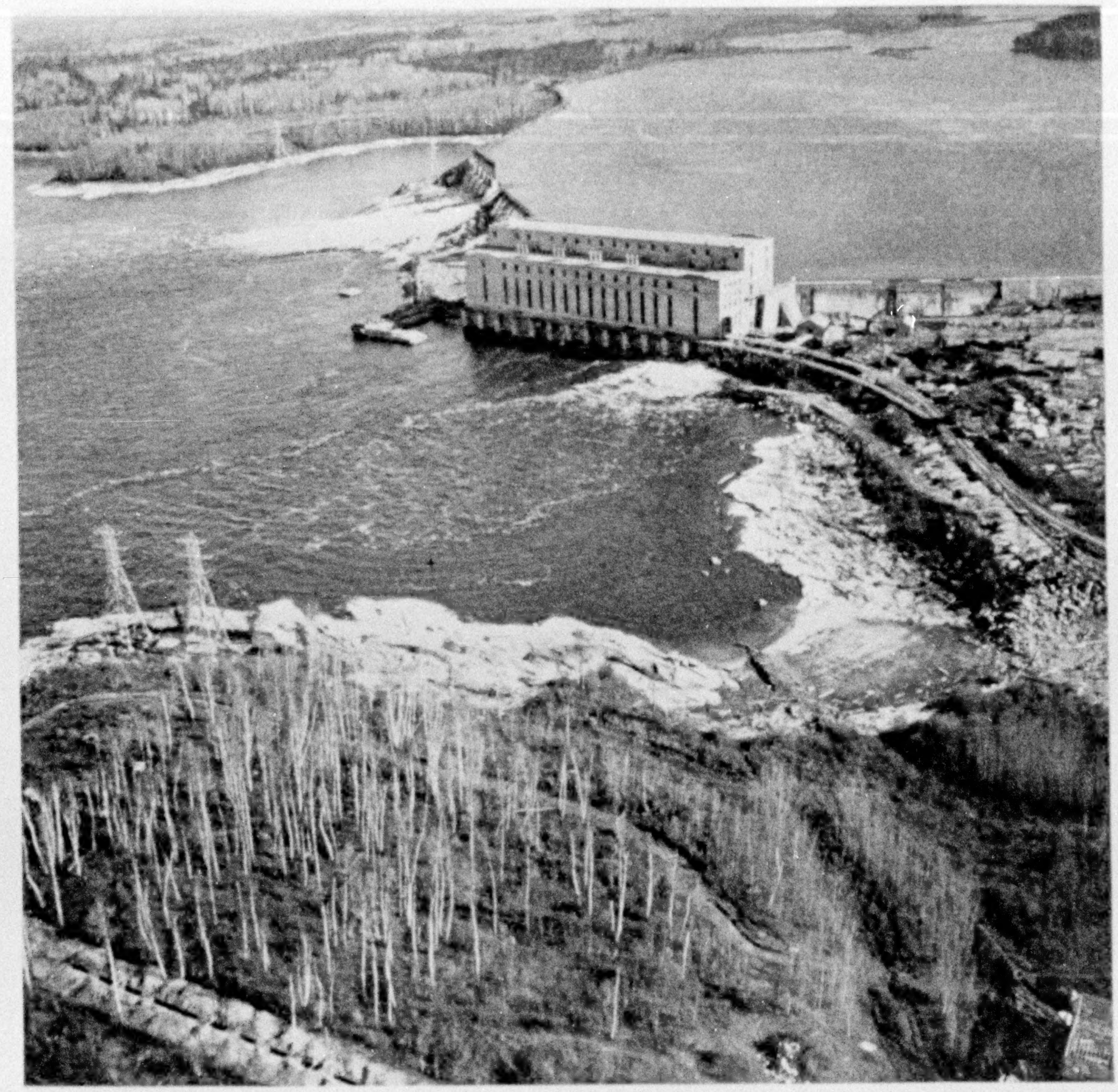
The planes shown here at rest on Lac la Ronge, Saskatchewan, are engaged in the important business of forest patrol. Though fires still do considerable damage in this district, aircraft have greatly reduced the annual losses.

Before returning to civilization this expedition visited the so-called "tropical valley" north of the Liard River, near Devils Canyon. The explanation of this phenomenon is that vapors from a large number of hot springs in the valley ward off severe frosts, with the result that the vegetation is of a size and rankness entirely out of keeping with this cold northland. An interesting example of this was found in one old garden, deserted by some unknown trapper or prospector years ago, wherein imported vegetables, flowers, and fruits still flourish.

This isolated region is undoubtedly rich in mineral wealth, in water power, and in forests. When brought into closer touch with civilization, it will become very productive. At present its remoteness is a great handicap, and if it were not that game is plentiful, living would be practically impossible. Flour now costs $27.50 a hundredweight; sugar, beans, and rice, $40 a hundredweight; butter, tea, and coffee, $1.50 the pound.

Flying from Liard post on the morning of August 28, the party returned at noon and landed the same day in Wrangell. In the afternoon they covered the 400 miles to Prince Rupert, after three months away from civilization, on what was probably the first extended exploration tour of this kind that was ever undertaken.

In 1924 mining development began in



NORTHERN CANADA HAS UNTOLD RICHES OF "WHITE COAL"

Since air traffic has opened the gateway to hitherto inaccessible lands, it is a question of only a little time until many unknown torrents will be harnessed. Great Falls dam and power plant on Winnipeg River in Manitoba.

the Rouyn district, and the first organized air transport route of the kind was then established by the Laurentide Air Service. More than 1,000 passengers, 80,000 pounds of freight, and thousands of letters and telegrams were conveyed from the railway at Haileybury into this camp during the year.

That summer a little city of tents and log shacks grew up in the forest many miles from any settlement or railway. To-day it is the center of one of the largest mining developments in the Dominion. The Noranda mining corporation's smelter is now in full blast and a model city has been built near the mine, complete with water supply, electric light, railways, and roads. The whole district is now a hive of industry. Many other mines are being developed and active prospecting, aided by airplanes, is being carried on all through the district. On such services an extraordinary variety of material is carried by air,—as one pilot expressed it, "everything from pigs to ice cream." An uninitiated passenger, inquiring whether this description was serious, was assured, "Why, certainly. The most regular freight we get into Rouyn from Haileybury is a barrel of ice cream on each afternoon trip, while, as for pigs, at mining camps there is always lots of waste food, and it pays us to

THE PAPOOSE HAS NOT MUCH FREEDOM OF ACTION

When the squaw comes to Churchill to see the railway construction work, she brings her children, the youngest in a cocoonlike bundle, which is carried on her back while she is on the trail.

buy a few piglets, take them in by air, and grow our own bacon and pork."

Air transport, too, played its part when the important gold strike was made in the Red Lake district of northwestern Ontario. Development has been slower there; no railway yet penetrates that district. But each season sees new camps and fresh finds. A 500-ton mill is being built at the Howey mine and others are contemplated.

Planes have been and still are much used to supplement slower transport by road and river. A steady stream of men, material, and mail travels by air to and from the railway at Sioux Lookout, or Hudson, and the mining camps to the north. In 1926 Capt. H. A. Oaks, with his little two-seater, on floats in summer and skis in winter, carried 260 passengers, 14,000 pounds of freight, and 3,000 pounds of mail.

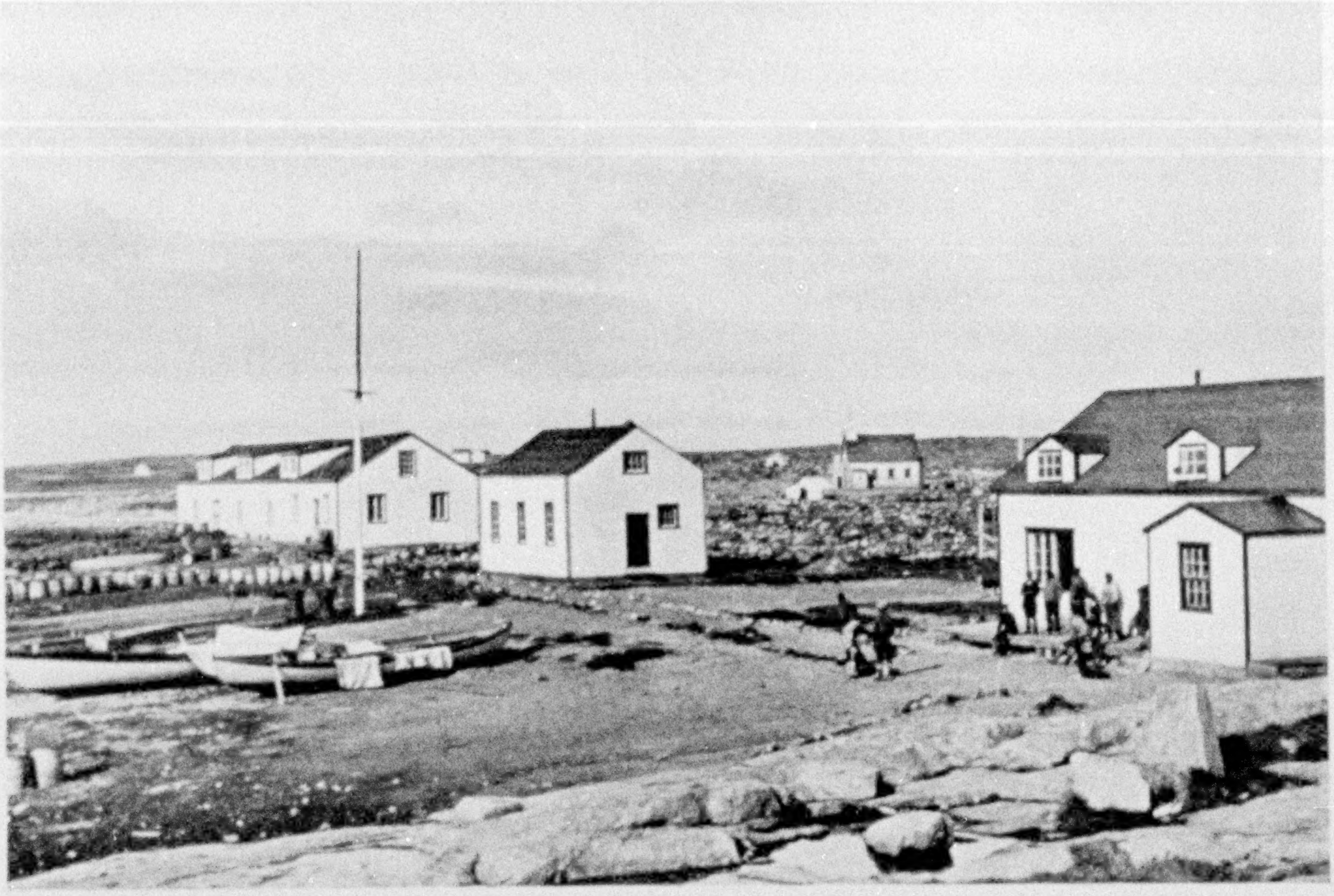
Oaks has been a leader in the organization of air transport as applied to mining exploration and transport in the north. He gained the Distinguished Service Cross on the western front, where he was wounded while fighting with the 48th Squadron, R. A. F. A mining engineer and geologist by profession, he had the advantage of seeing this development from both sides. He knew intimately the requirements of the field geologist and the possibilities and limitations of aircraft.

He had served for two years as pilot with the Ontario Air Service and was on forest patrol in the Red Lake district to assist in coping with the greatly increased fire hazard consequent on the rush of prospectors after the gold strike there. Recognizing the need for better transport to speed up development and make the commercial air service self-sustaining, he resigned his Government position when the snow came in the fall and the fire season was over and began work as a common carrier of the air.

He organized Western Canada Airways to cope with the rapidly increasing demand for aircraft in that district and in northern Manitoba. As an example of the kind of air work on which this group is now engaged, the following narrative is interesting:

WINTER NO LONGER SHUTS OFF THE NORTHLAND

The Department of Railways and Canals had called in a London engineer to report on the best location for the railway terminus and harbor works for the Hudson Bay line. Preliminary to his visit to Canada to inspect the natural conditions at Port Nelson and Churchill, this engineer asked for full information, with

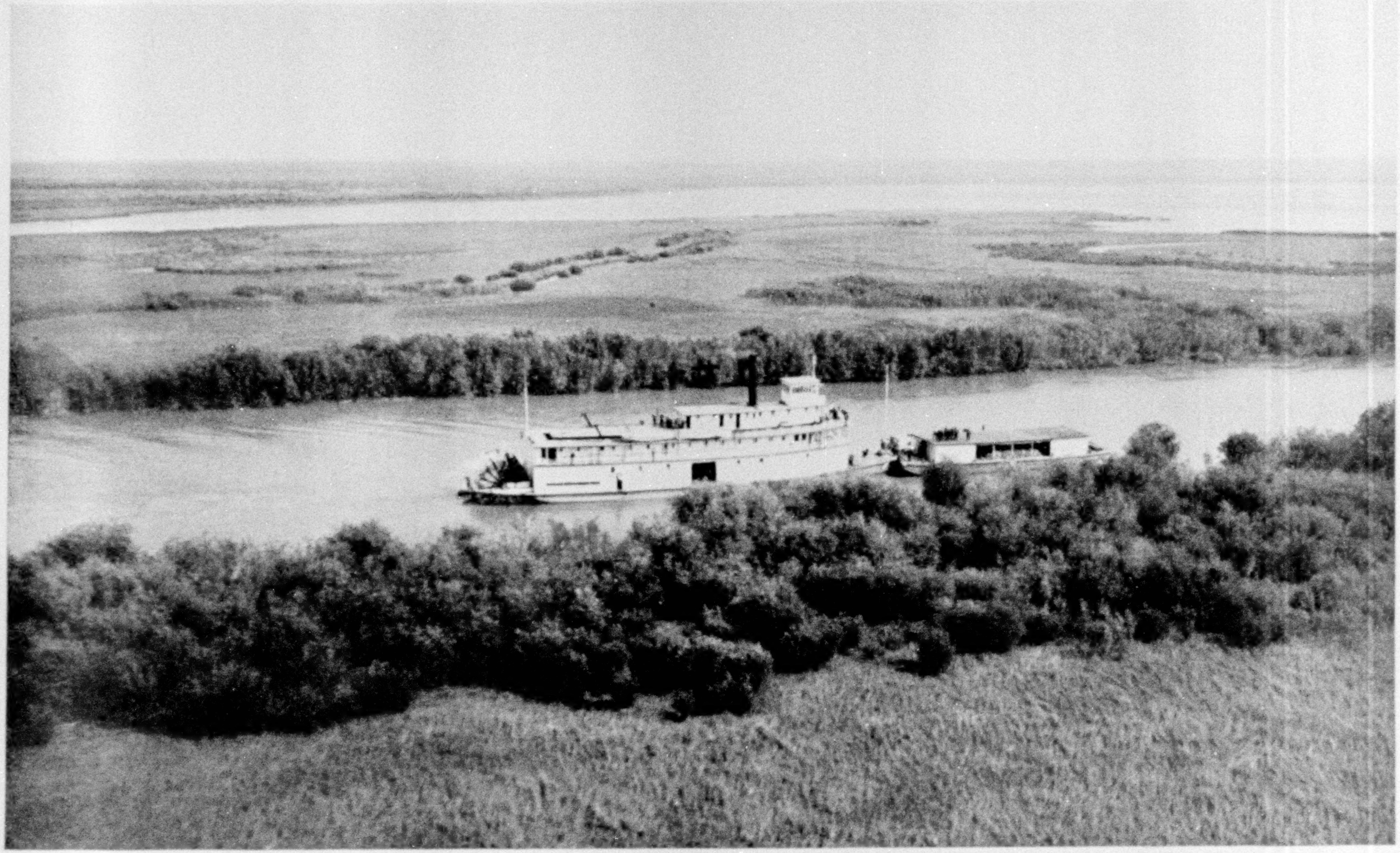


FAR-FLUNG TRADING POINTS ARE NO LONGER ISOLATED

To Chesterfield Inlet, in the remote Keewatin District, airplanes now wing their way, bringing the Hudson's Bay post and mission within a few hours of railroads and markets.

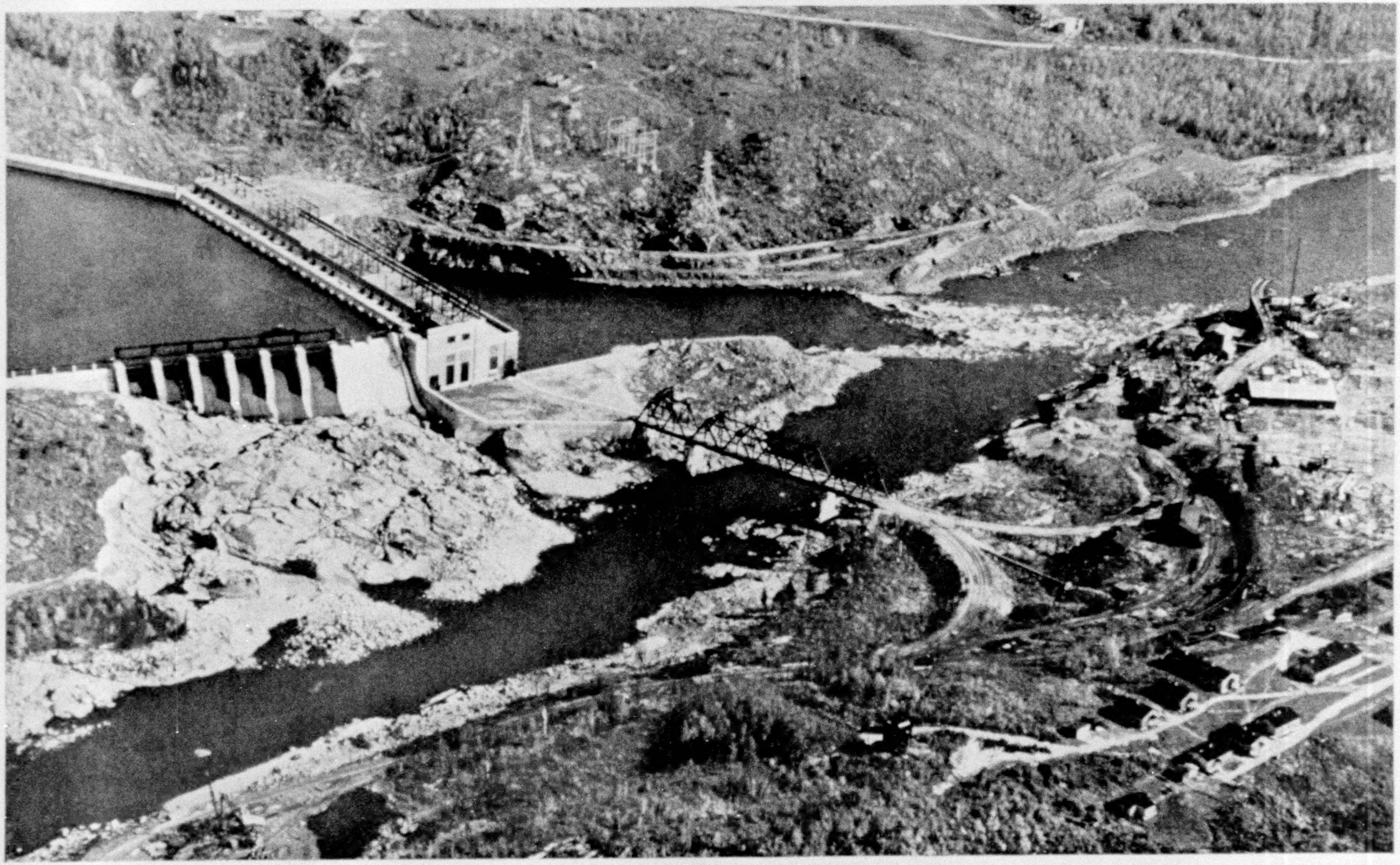
EMULATING ELIZA MAKES GOOD SPORT ON WAKEHAM BAY

The doctor of the Hudson Strait Expedition is out for a bit of exercise on the breaking ice where a slip or misstep would mean a cold plunge.



CONSIDERABLE TRAFFIC MOVES ON THE SLAVE RIVER

The Steamship *Athabaska* plies between McMurray and Fitzgerald, Alberta, in the heart of a country rich in vegetation.



DEVELOPMENT GOES ON APACE IN THE NORTH

Tremendous resources are being opened by the dam and power plant on the Saguenay River, Quebec. Within a few years such projects will be under way in far districts now accessible only to aircraft.

FOR LAND TRAVEL DOGS ARE INDISPENSABLE

When snow blankets the Northwest Territories, the malemute or husky comes into his own. This team hauls supplies to a lonely trading post.

HOSPITALITY SAVES LIFE IN NORTHERN QUEBEC

Had it not been for the kindness of Tom Moar and his family, Captain Saunders and his two passengers would have perished when their monoplane broke through the ice of Ashuapmuchuan River. The Indian trader fought his way on snowshoes through 100 miles of wilderness to bring assistance, while the air adventurers were made comfortable in his cabin (see text, page 608).

WAKEHAM BAY LOOKS COLD AND FORBIDDING

Base C of the Hudson Strait Expedition lay in the heart of the winter lands. Operations went on here for more than a year.

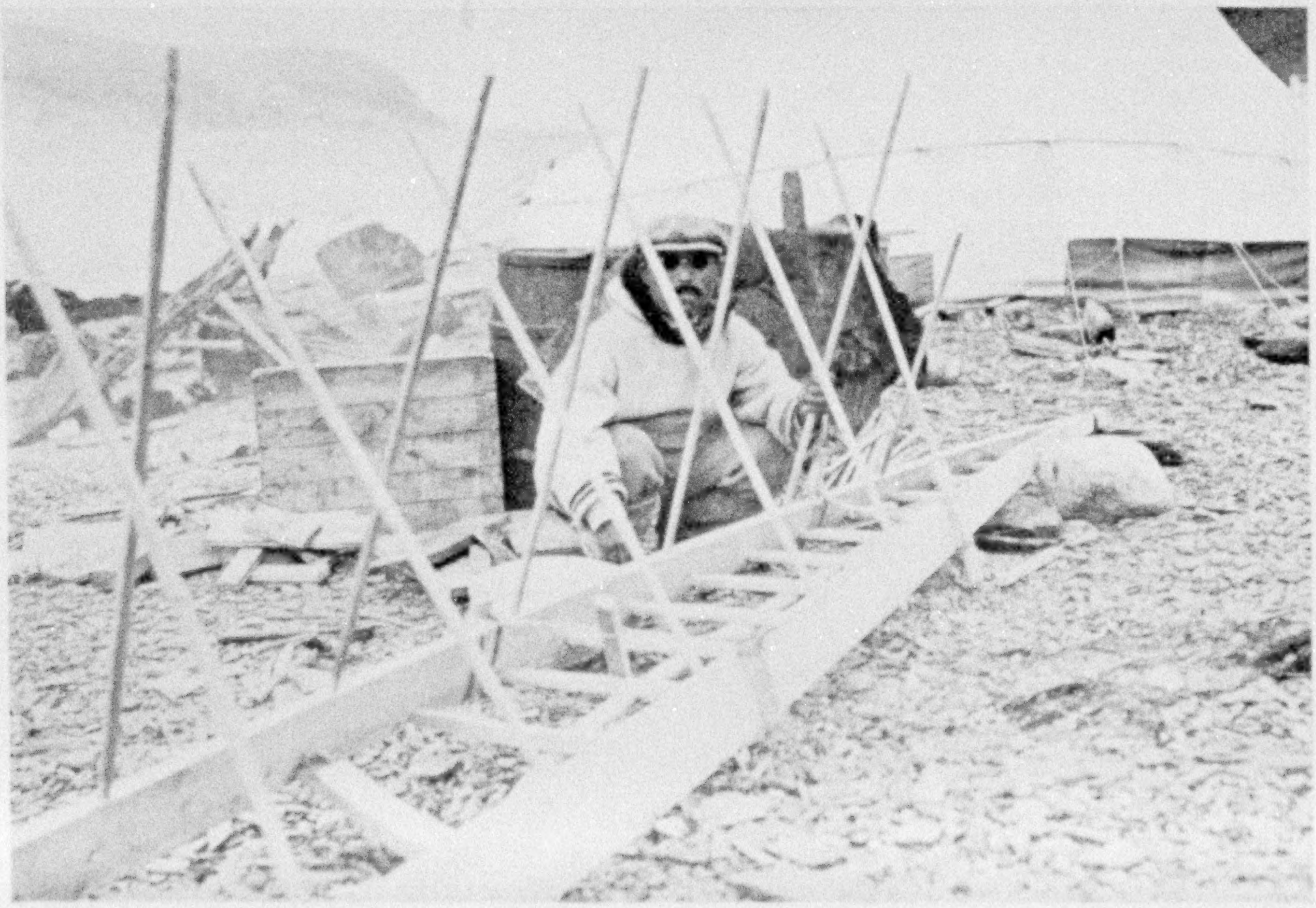
maps and charts of the two locations. These were furnished. But in December, 1927, it was found that no data were available on the nature of the subsoil at Churchill, and that borings would be necessary.

Churchill was then icebound and separated from the end of steel on the railway by 280 miles of grim frozen waste, where there was no road and no habitation. Access by sea was impossible for six months. The Department of Railways and Canals then sent for Captain Oaks and offered him a contract for the conveyance of machinery, supplies, and the personnel of the party. Captain Oaks accepted it and left the same night for New York, where he purchased two Fokker planes. Delivery was obtained in the first week in March. The machines, equipped with wheels for landing, were flown from New York to Camp Borden, Ontario, where the wheels were replaced by skis. From Camp Borden the planes proceeded west right through northern Ontario to Sioux Lookout; thence across the lonely forest land of eastern Manitoba to Norway House, where they refueled, and thence to the end of steel, near Split Lake, where the engineer party, with its equipment, was waiting (see map, page 600).

In three weeks Oaks was back at his base at Sioux Lookout, having carried

FLOWERS DELIGHT ESKIMO CHILDREN

These boys are gathering the wild blossoms that grow in profusion around Wakeham Bay, base of the Hudson Strait Expedition.



ESKIMOS SHOW SKILL AS BOAT BUILDERS

When the Hudson Strait Expedition reached Wakeham Bay, Quebec, the seaplanes landed on waters that seldom harbor craft larger than the kayak. It takes a native to construct and navigate one of these tricky canoes.

twelve men and 15,000 pounds of material to Churchill. There borings were made and the desired data obtained nine months earlier than would otherwise have been possible. The prompt decision to locate the railway terminus at Churchill was dependent on this information.

Another similar operation was the conveyance by air of 40 men and 35 tons of supplies, including diamond drills, required for the development of the Sherritt-Gordon claims in the Cold Lake district, one hundred miles or more from The Pas. By taking this equipment in by air, the mining group was able to prove its mineral deposits and proceed with the building of a railway to its claims many months ahead of schedule.

For his work in organizing air transport in the north, Captain Oaks was awarded the McKee Trophy for 1927. This is given each year in Canada to the person who performs the most meritorious service in the advancement of civil aviation in the Dominion.

A SEAPLANE RIDES THE WAVES ON DEASE LAKE

This base of the expedition that carried three prospectors into the Cassiar and Yukon country in 1925 lies 2,500 feet above sea level (see text, page 611).

DEVELOPMENT OF MINERAL RESOURCES PROCEEDS APACE

Captain Oaks's chief interest is mining, however, and he joined with Mr. J. E. Hammell, one of the most experienced prospectors in the north, in the formation of the Northern Aërial Minerals Exploration in the beginning of 1928. Their interest is primarily mining exploration and not commercial aviation, but they specialize in the use of aircraft for the transport of parties and their maintenance in the field.

The captain's log book for 1928 is an unparalleled record of travel at all seasons through northern Canada. In August he was at the headwaters of the Nahanni River, on the divide between the Yukon and the Northwest Territories, following up a story of a rich placer strike and murder mystery which has been a lure to miners for years (see page 612).

Oaks first heard the story when he was on his way to the Norman oil field, in 1921, and tried to get a syndicate together to follow it up. With the aircraft and engines then available, this was not

SMOOTH SNOW MAKES AN EXCELLENT LANDING FIELD

Pilots Oaks and Reid found conditions not impossible on their winter flight from Remi Lake to Richmond Gulf (see text below).

possible. Lieutenant Colonel Williams approached it from the Pacific in 1926 and Captain Oaks from the east by the Mackenzie Valley route. Oaks describes the area as "a hunter's paradise." The valleys are well wooded, the streams full of trout and grayling, and the woods full of moose, caribou, black and grizzly bears, with goats and sheep in the mountains. There are many hot springs, similar to those reported by Williams in the valleys, and the captain declares it an ideal location for a "dude ranch."

While on the Nahanni, Oaks thought it best to call in a supporting machine, and summoned one from Winnipeg by the wireless service maintained in the north by the Royal Canadian Corps of Signals. Captain McDonough received the message at lunch time in Winnipeg and left about 3 o'clock in the afternoon. Refueling at Ile à la Crosse and Fitzgerald, on the Slave River, he had supper with Captain Oaks at Simpson next evening.

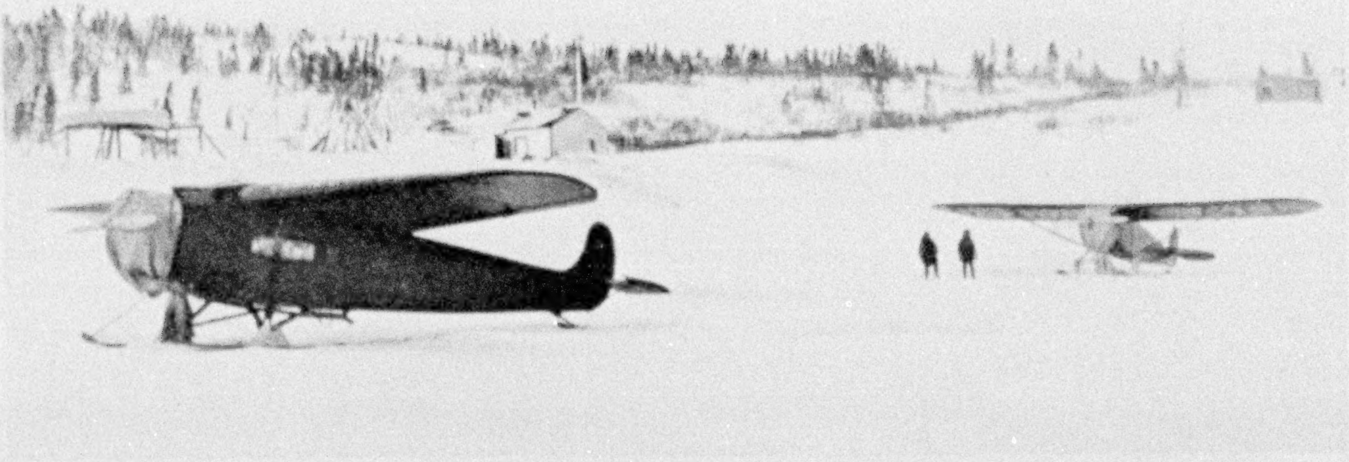
McDonough, alone in his Fokker, had to attend to his own refueling and mooring. When one considers the distance he traversed, 1,400 miles, cross country, in little over 24 hours, and the wilderness flown over, this cruise constitutes a very remarkable record for an ordinary commercial aircraft.

Having met, the two planes took their prospector passengers and camp outfit up the Liard and the Nahanni to its junction with the Flat River. By September 15 they were forced by coming freeze-ups to return to civilization. Severe cold and snowstorms were met with on the return journey, but Edmonton was reached in safety on September 23.

WHEELS GIVE WAY TO SKIS

Skis must be used in winter. In the Christmas holidays Captain Oaks and Pilot Pat Reid, each with a plane, left Remi Lake, on the Canadian National Railway, on a trip up the east side of Hudson Bay as far as Richmond Gulf. There they had a rendezvous with a prospecting party which had been left there by a schooner during the summer to be picked up by plane in January (see page 602).

Oaks and Reid were accompanied by two honeymooners, an Anglican missionary and his wife, who desired to return to the mission station at Rupert House. By dog team this trip would have taken six or eight weeks for the outward journey alone. There are only five settlements between the railway and Richmond Gulf, and the route lies over several hundred miles of the rocky, eastern shore of James and Hudson bays, fully exposed to



WINTER HOLDS NO TERRORS FOR THESE "GRASSHOPPERS"

Though the monoplanes resemble the improvident insect of the fable, they weathered the cold of a January flight without serious mishap.

the sweep of the Arctic gales over the open waters.

An hour's flying brought them to Moose Factory, where they left the mail. In fine weather they hopped for Rupert House. But, without warning, a blinding snowstorm swept down on them while they were crossing Hannah Bay. Visibility was *nil*. They flew over Rupert House without seeing it and landed on the coast seven miles north an hour before dusk.

The two airplanes had become separated in the storm, and Reid landed about the same time, on the ice three miles offshore. To prevent his machine being blown away, he immediately froze his skis to the surface ice. He and his mechanic then made themselves comfortable in the cabin till the storm should pass.

Oaks, with the honeymooning passengers, taxied to the shore to find a sheltered spot to spend the night. While doing so they broke a ski. But the brave bride cooked emergency rations for supper over a blowtorch and all settled down for the night.

In the morning things looked hopeless. It was 40 below and blowing a steady blizzard. The plane was disabled and frozen in. Oaks set out on foot to locate Rupert House. After tramping miles along the coast, he recognized a landmark and realized that he was north, and not south, of the post. Retracing his steps to the plane, he found that an Indian trapper had passed by and had taken word to Rupert House. About midnight, on New Year's Eve, a dog team arrived for the newlyweds and took them home to the mission.

The weather cleared next day and repairs were made to the ski by a blacksmith from the mission station. Then both planes were unfrozen and the trip was continued to Richmond Gulf, where the prospectors were picked up.

MISHAPS WERE INFREQUENT

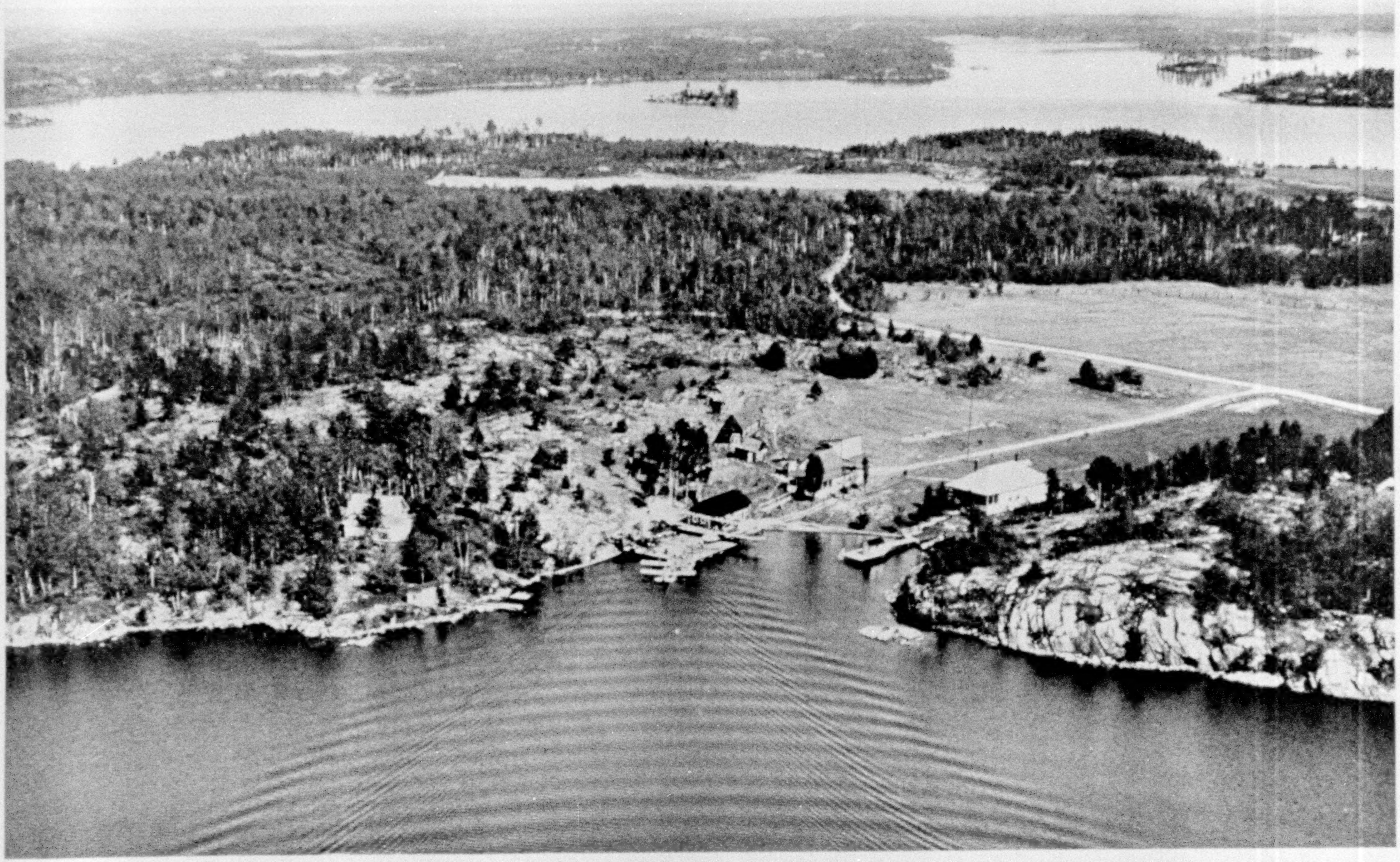
Many similar flights by pilots of the Northern Aërial Minerals Exploration could be recounted. Captain Berry spent the summer on the inhospitable shores of Baker Lake ferrying prospectors around the district as far north as the divide, into Wager Bay. His brief tale of conditions there is heartbreaking—constant gales and blizzards, low banks with little shelter, moored aircraft dragging their anchors and having to be beached on rocky shores. Coming south in October, just before the freeze-up, Berry landed to refuel at Churchill. Ice floated in the river; it was bitter cold and blowing a gale, with a heavy sea running. It was imperative to leave before the ice "took." As the plane

ACCIDENTS BRING OUT RESOURCEFULNESS

When a propeller is broken or twisted, the adventurers of the air perform miracles of repairing with the crude materials available in a land where smithies are few (see, also, text, pages 602, 633).

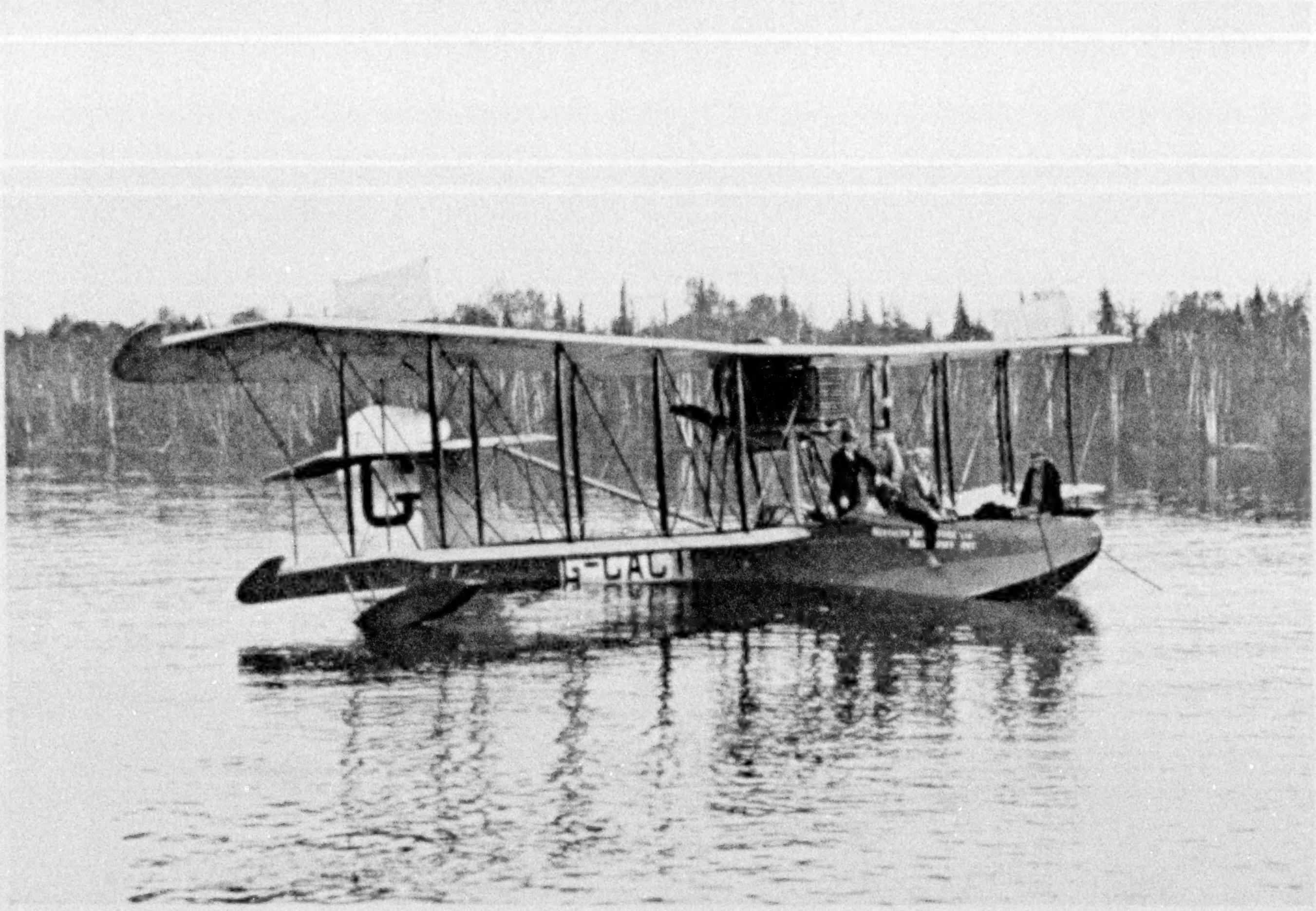
WINTER FLYERS MUST BE HARDY

The expedition which flew in midwinter from Remi Lake, north Ontario, to Richmond Gulf, on the east shore of Hudson Bay, experienced the rigors of severe Arctic weather (see, also, text, page 624).



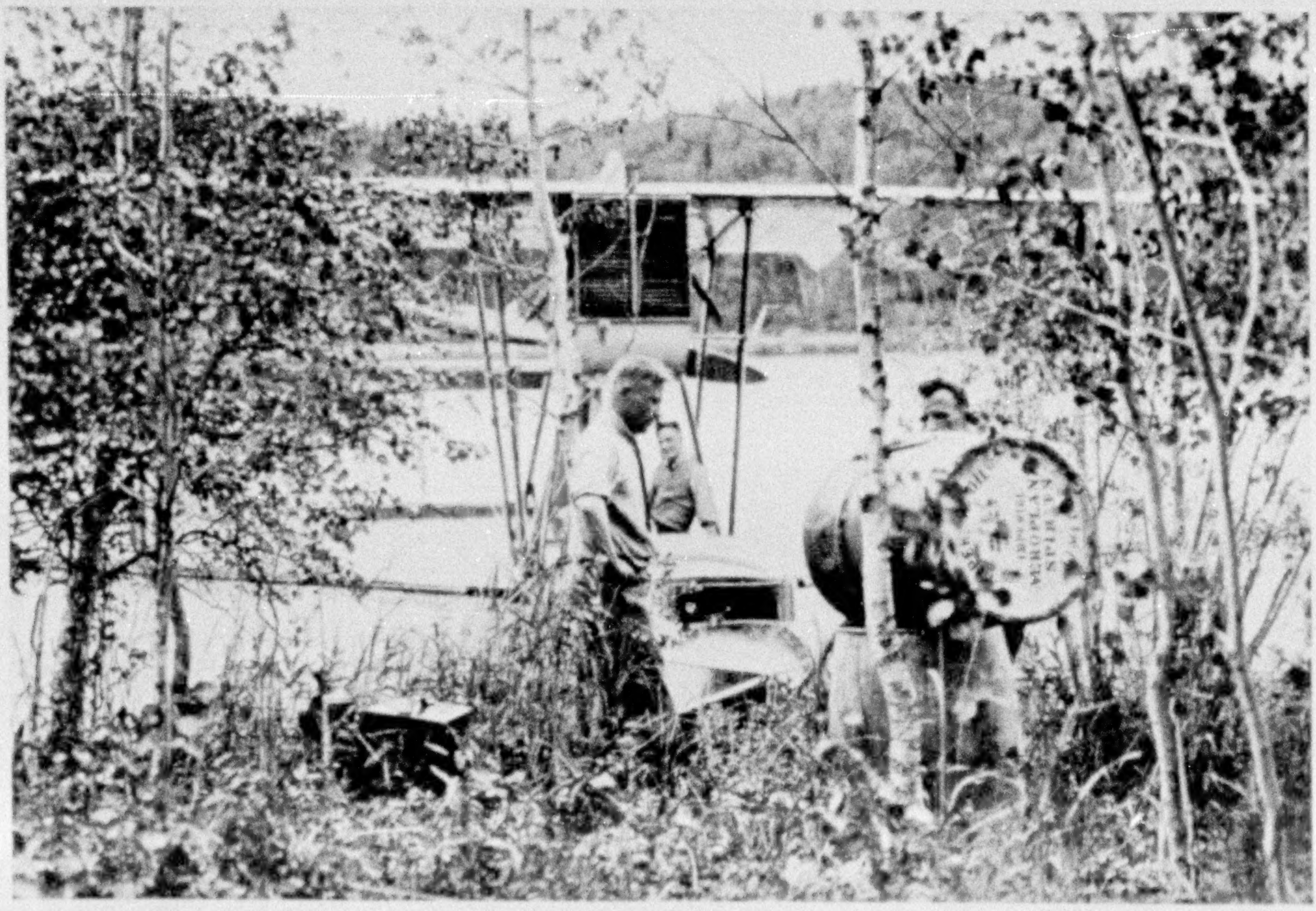
LAKES ARE THE FLYING FIELDS OF THE WILDERNESS

In the rugged country of forests and mountains, where landing on the ground is perilous, aircraft are equipped with pontoons in summer and with skis in winter. Sudbury, on Ramsay Lake, is the seaplane base for the Provincial Air Service of Ontario.



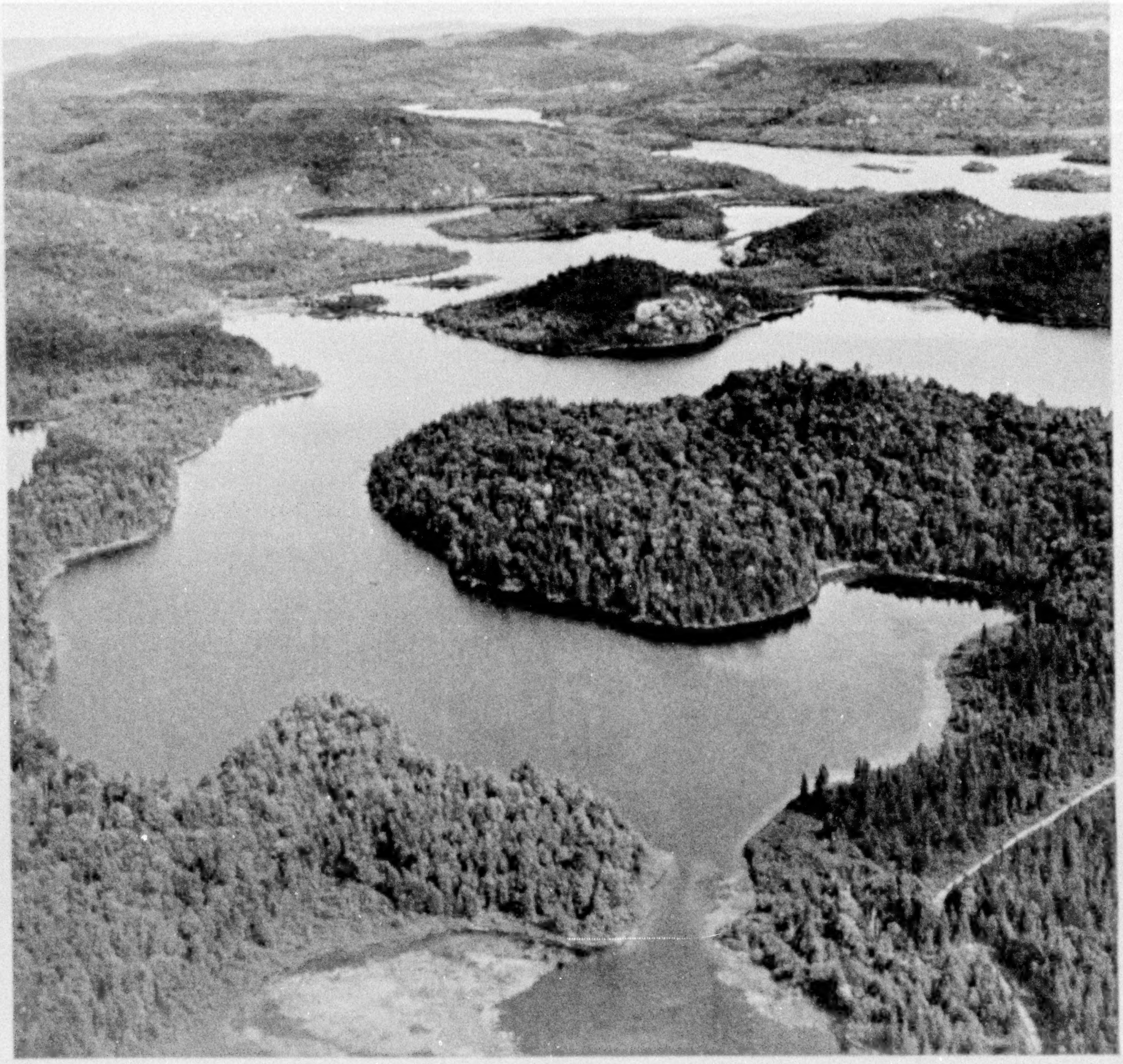
PLANES CARRY EVERYTHING ON THE QUEBEC FRONTIER

Passengers are shown here at Rouyn embarking for the regular flight to Haileybury. Supplies for this remote mining district, from pigs to ice cream, come in by air (see text, page 615).



STANLEY MISSION SERVES AS A REFUELING STATION

This base on Churchill River north of Lac la Ronge, northern Saskatchewan, supplies aircraft for long flights over untouched wilderness.



ONLY SEAPLANES CAN ALIGHT IN NORTHERN QUEBEC

In this characteristic country of the Lake Archambault district the numerous placid lakes are the only safe landing fields. Here is a vast stretch of virgin timber of enormous value.

taxied to take off, the heavy seas damaged a float. The aircraft turned over and had to be beached. No one was injured and no property lost. It is remarkable, under such conditions, that this was the only major loss sustained in the north in 1928, all through hundreds of hours' flying, by scores of aircraft (see page 631).

The air-transport business of Western Canada Airways has continued to expand, and the company now owns 35 aircraft of the latest types, from trimotor Fokkers to Moth light aircraft. It operates all through northwestern Canada. Wherever there is freight to carry or men to be flown, it will undertake the job. In two years it has built up a business which, with the exception of that of the great air-transport companies operating on the main air-mail routes in the United States, is without parallel in the world for an unsubsidized, purely commercial venture.

Many of the most resolute and experienced pilots now engaged in northern work served their apprenticeship in remote flying in the ranks of the Provincial Air Service of Ontario.

G. A. Thompson, pioneer flyer down the Mackenzie Valley, is in charge of operations at The Pas. His record in 1928 covers 22,000 miles, flown on a Wasp-engined Super-Fokker. No repairs of any kind, except for two changes of spark

NORTHERN MANITOBA HAS VAST MINERAL WEALTH

Preliminary development is well under way at the Sherritt-Gordon mines, in a district isolated from the world were it not for the airplane. A branch railway from the Flin-Flon line is being built to this field (see, also, text, page 599).

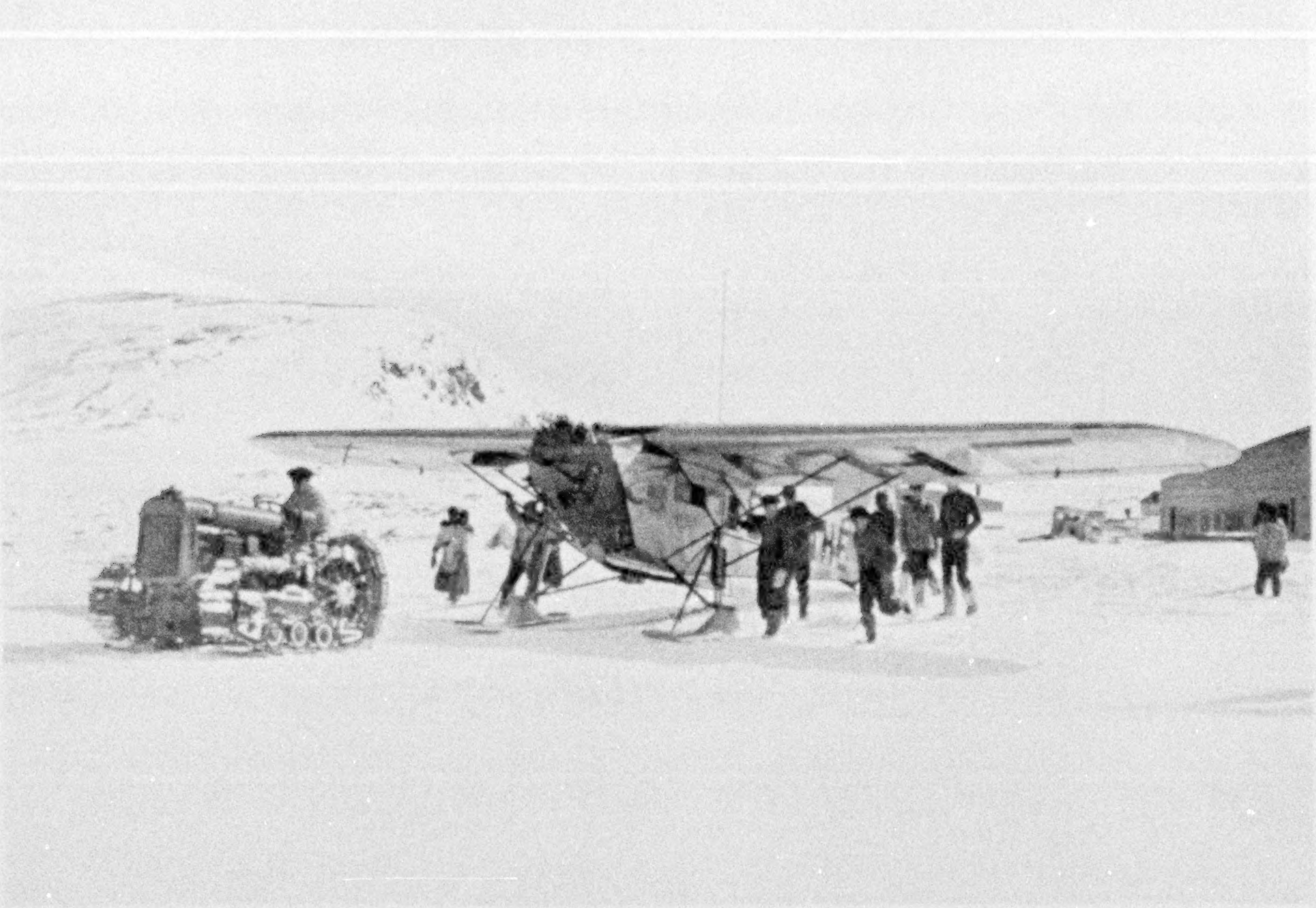
plugs, were made. His itinerary included trips to Corbett Inlet via Churchill and Cape Eskimo, bringing out prospectors for one of the mining companies.

MISSING PROSPECTOR FOUND BY AVIATOR

He writes: "The Barren Lands are well named, and I can't imagine a more desolate spot or one more void of landmarks. From a pilot's point of view, you could not operate in a worse country. From Churchill to Corbett Inlet I did not see one good sheltered harbor in which a machine could ride out a storm; the coast is low and rocky, with hidden reefs for several miles out, which are exposed at low water."

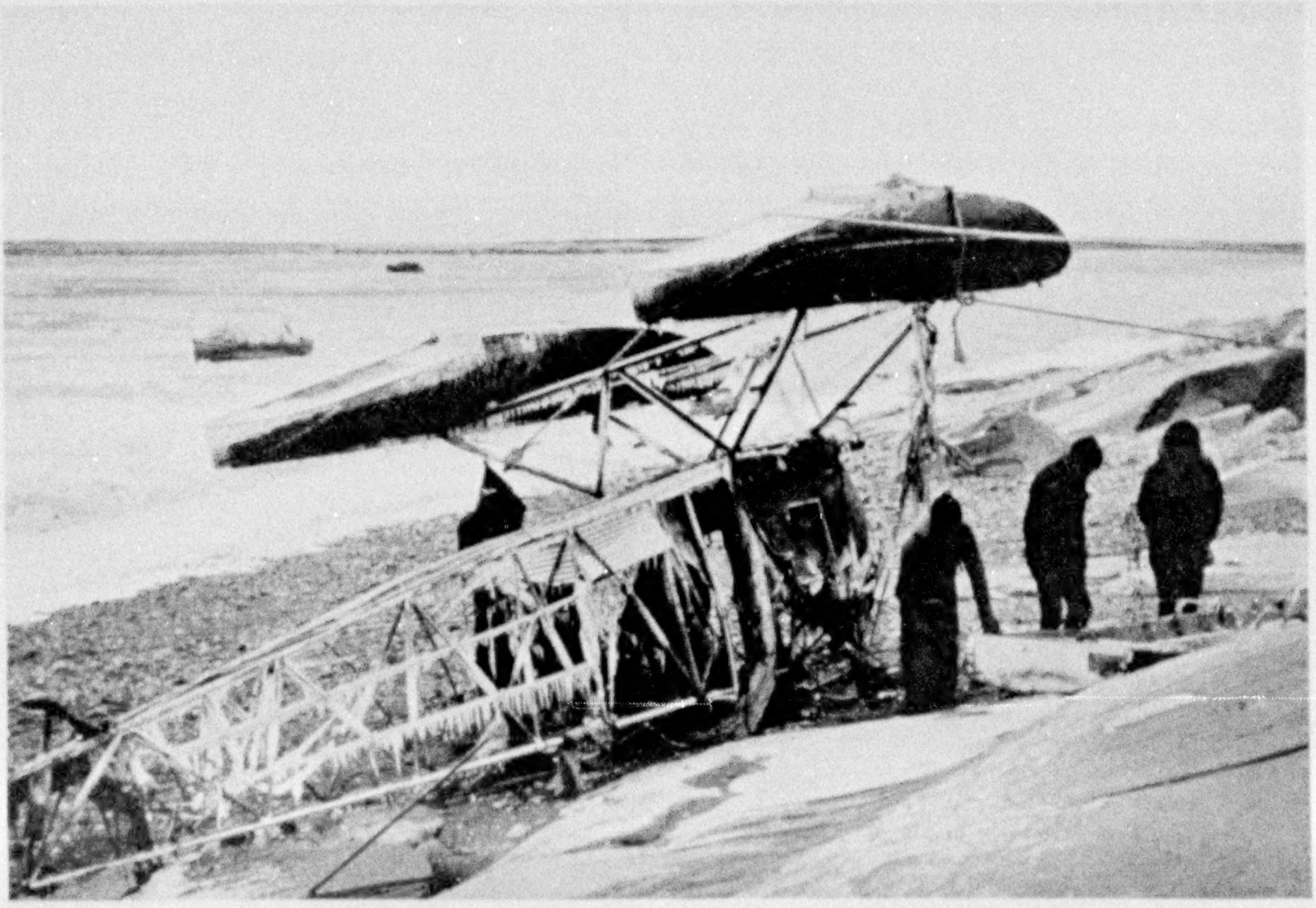
One of Thompson's achievements was the successful search for Andy Taylor, a prospector who, on June 26, was reported missing in the Cold Lake district, north of The Pas, and was not found till August 14. When rescued he was almost at the end of his tether, weak from starvation after living for many weeks on berries.

Another of Canada's pilots, Capt. C. H. Dickins, D. F. C., who served on photographic operations in the prairie provinces and whose work in this field excited much attention, made a most remarkable flight, carrying prospectors. His cargo included an air mechanic and two passengers, with complete camping outfit, emergency rations, and collapsible canoe.



THE MOTOR AGE HAS REACHED HUDSON STRAIT

To the natives at the Wakeham Bay base, whose only means of transportation over the snow and ice is the dog train, a caterpillar tractor, used to tow the monoplane to the runway, seemed almost as strange as the "flying canoe."



LOSSES HAVE BEEN AMAZINGLY FEW IN NORTHERN FLYING

To escape being frozen in at Churchill Harbor, Captain Berry was forced to take off in a storm and his plane was wrecked; but no one was injured and the aircraft was salvaged (see text, page 625.). This accident was the only serious mishap of 1928.

REINDEER LAKE IS AN ANGLER'S PARADISE

When the larder at Brochet, Manitoba, runs low, it is easily replenished with delicate trout and whitefish or the gamy muskellunge.

The route was from Winnipeg to Churchill; thence to Chesterfield Inlet, west to Baker Lake, and southwest to Lake Athabaska by the Dubawnt River; thence north to the Great Slave Lake country and back to Winnipeg via Lake Athabaska, Black River, Wollaston and Reindeer lakes, Reindeer River, and The Pas. The distance covered was about 3,960 miles, yet flying time was only 37 hours. The party was absent from civilization for 12 days. No effort was made to break any records and the trip was purely one for studying the possibilities of prospecting by air. By a land route such an expedition would have meant at least two seasons' travel and much hardship.

The explorers' description of Chesterfield Inlet is absorbing. It is a magnificent waterway extending 300 miles inland. Baker Lake joins it to the west, and quite large schooners can be navigated to the west end of the lake. Around Chesterfield Inlet and Baker Lake the country is much more rugged than farther south. One hill near Baker Lake stands out for miles, a wonderful landmark for air pilots.

At the junction of the inlet with Baker Lake there are "reversible falls," similar to those at St. John, New Brunswick. The shallow bottom and rise and fall of the tides cause this phenomenon. The party spotted at least one magnificent water-power site on the shore, where a large, unnamed river falls at least 200 feet.

Captain Dickins's report on his long flight across the Barren Lands to Lake Athabaska by the Dubawnt River, over country which has been traversed only once or twice by white men, reads as follows:

"On September third we left Baker Lake and followed up the Thelon River to Aberdeen and Beverly Lake, then south by west up the Dubawnt River to Dubawnt Lake, and on through a chain of lakes to the height of land and to Fond du Lac at the east end of Lake Athabaska. This was over the real Barren Lands, and from the time we left Baker Lake we never saw a living thing until getting near the tree

NO CITY CHEF CAN BETTER CAMPFIRE COOKING

With the keen air of the north to sharpen the appetite, who could think of an aroma more delicious than that of coffee and bacon?

line again, when a few birds were seen. The tracks of caribou could be seen here also. The maps I find are fairly accurate of this route down to Dubawnt Lake, but from there on practically useless. There is a great maze of lakes all over this country, and a good seaplane route. Nearing the height of land the lakes get smaller, but are quite large enough for any machine the size of the Fokker. The height of land is very clear and is a good landmark. I flew by the sun most of the way, as the compass goes around in circles in several places, and the last hundred miles the visibility was very poor, owing to smoke. Wholdaia and Selwyn lakes do not look anything like the map, and both lakes are much larger than marked, with many bays and inlets. The best landmark on this route is the height of land."

DRIFTLESS AREA A PROSPECTOR'S PARADISE

Here is the real "barren land." But apparently it is a prospector's paradise, since the rocks are clear of drift. From the preliminary survey made of the rocks, geologists predict that when the country can be thoroughly prospected, the mineral deposits will be found to be very much more widespread than has been supposed.

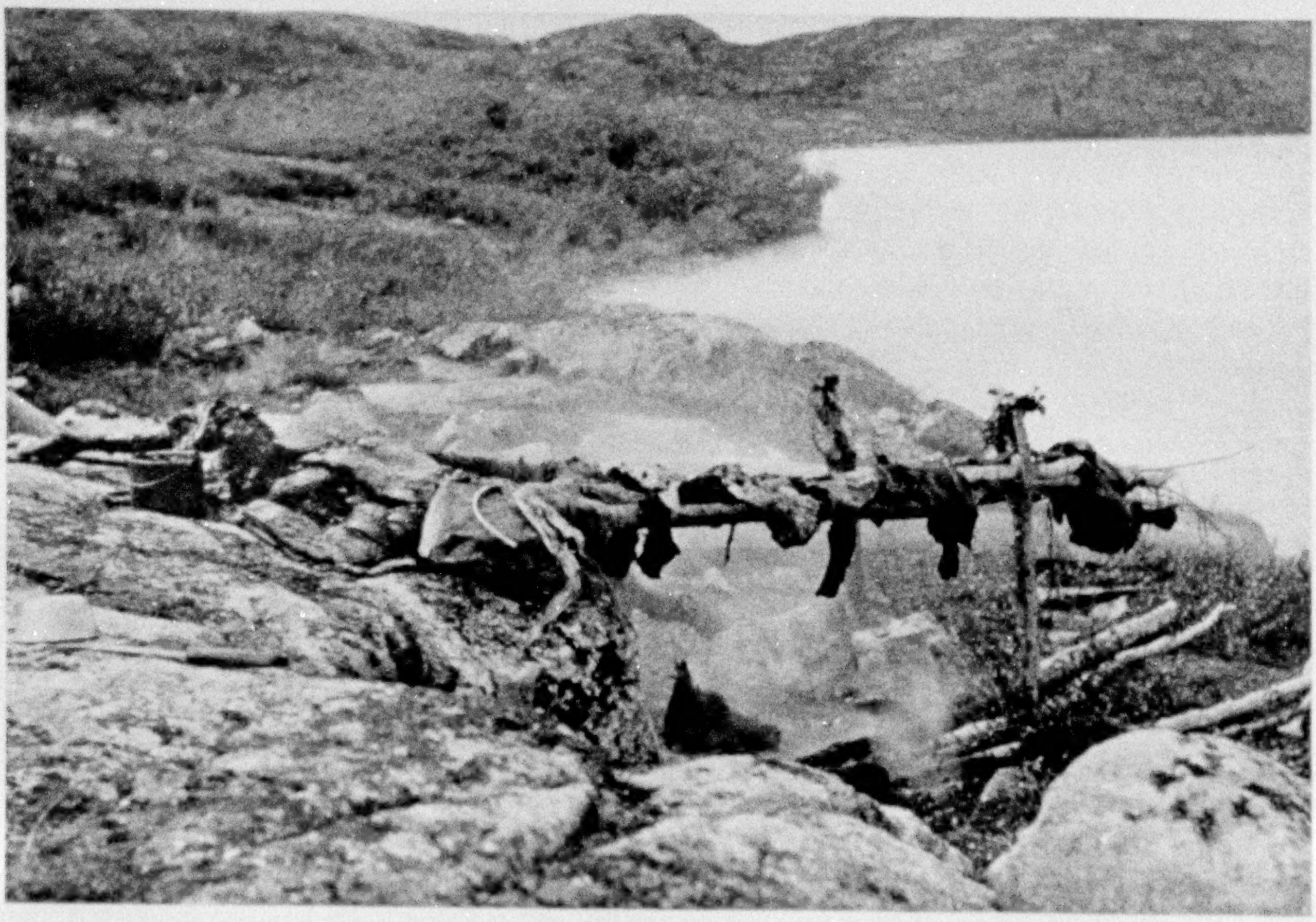
Last winter Dickins pioneered a weekly mail, passenger, and express service—a regular "air accommodation train"—from the end of steel at Waterways, Alberta, down the Mackenzie basin to Simpson, with occasional trips to Norman and Good Hope, the latter almost on the Arctic Circle. On his first landing, at Resolution, he ran into rough ice and wiped off the undercarriage of his Fokker. The metal propeller was also badly damaged. Nothing daunted, he and his mechanic rebuilt their landing gear with some pipe and iron rods obtained at the post, straightened out the propeller, cutting eight inches off one tip to balance the other, which was broken, and then flew the monoplane out to the railway again.

A short press item may be quoted as typical of Dickins's work in this service:

"An auction sale of $75,000 worth of furs in Winnipeg on March 14 was interesting, in view of the fact that the furs had left Fort Good Hope, 1,600 miles

NATIVES LAUGH AT THE RIGORS OF THE ARCTIC

The Hudson Strait Expedition gave employment to many of the hardy dwellers of the Port Burwell region. They proved strong and willing workers.



MEAT-CURING IN THE NORTH REQUIRES LITTLE EQUIPMENT

"Jerked," or dried, caribou flesh is a staple food in the north. This outdoor "smokehouse" is on the shore of Artillery Lake, in the Mackenzie District, northeast of Great Slave Lake.

Photograph by Arthur Pike

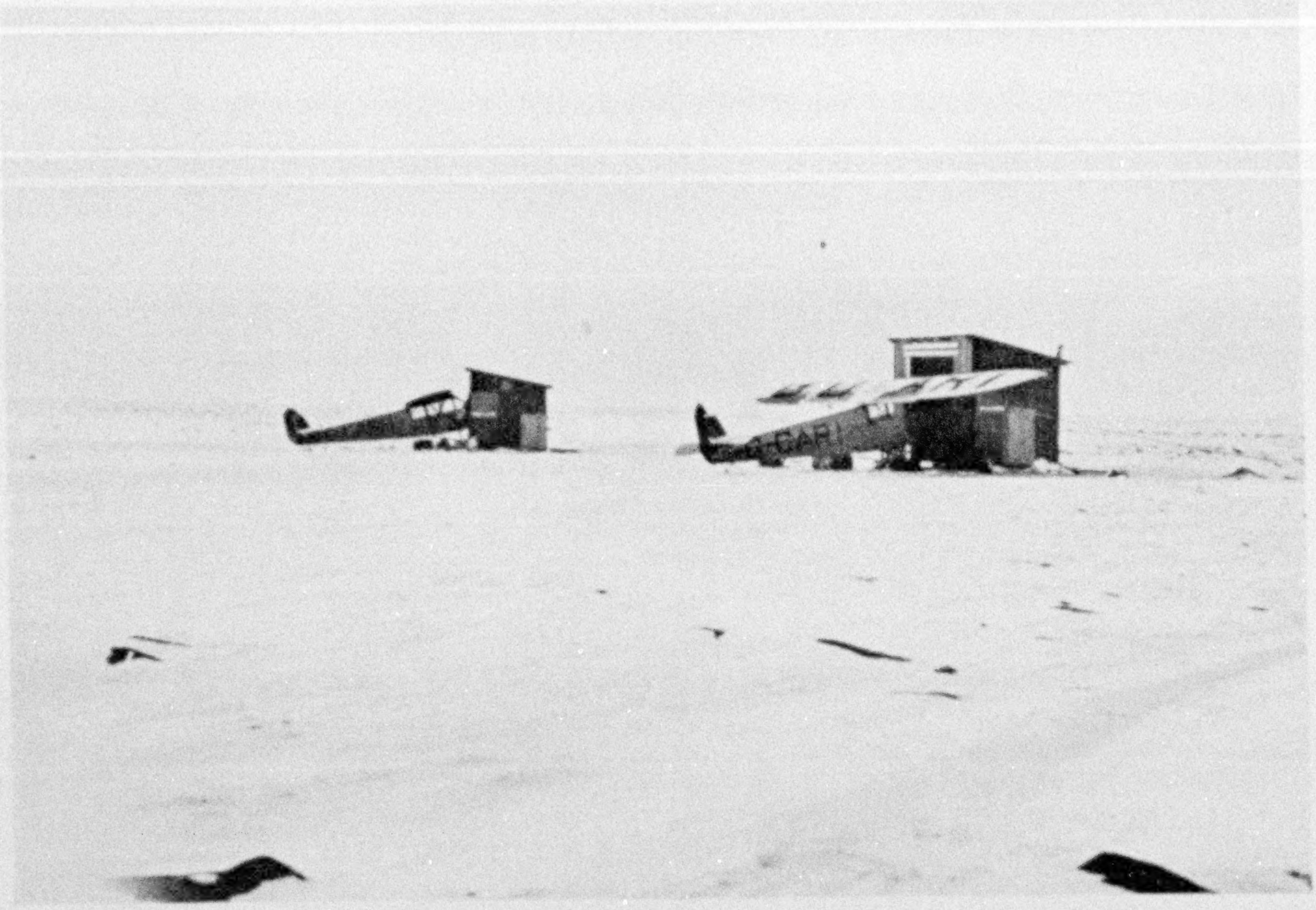
CARIBOU SWIM THE YUKON IN HERDS

Driven to the river every autumn by bears and other beasts of prey, these animals fall easy victims to the Indian hunters, who slaughter them in great numbers and store their meat for winter use.

north of Edmonton and on the rim of the Arctic Circle, only 4 days previously. Pilot Dickins, of the Western Canada Airways, who was recently awarded a trophy as the pilot who had done the most for aviation in Canada in 1928, made the trip from Waterways, at the end of the rails in northern Alberta, to Fort Good Hope and return, on behalf of the Winnipeg Fur Trading Company, calling at the various trading posts along the way. On the trip north he carried 950 pounds of mail and a passenger. The flight was made under difficult conditions, the thermometer dropping to 64° below zero at times. The value of this method of transportation may be appreciated from the fact that furs from the Mackenzie River district would not ordinarily reach Winnipeg for 3 or 4 months."

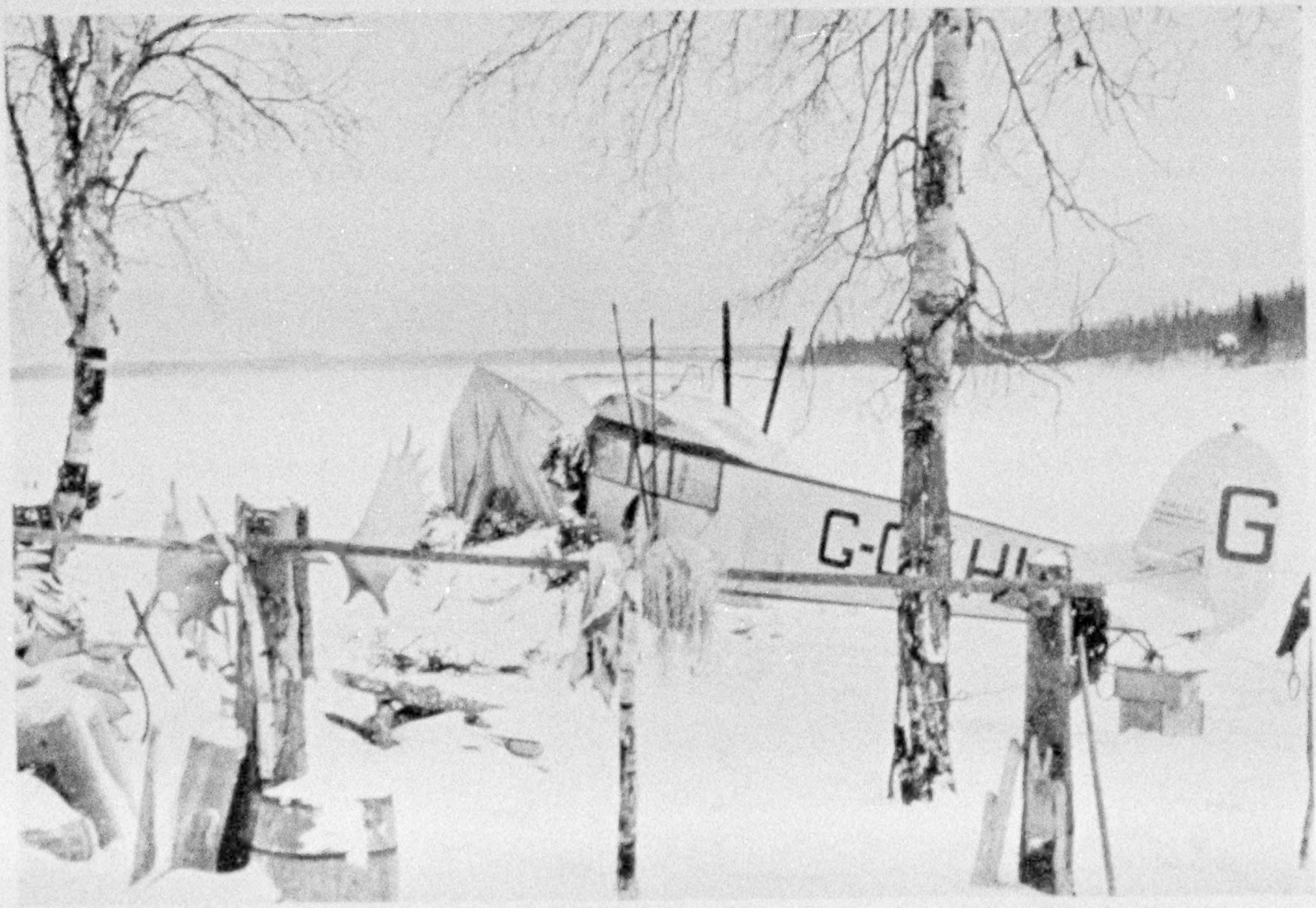
Mails which previously took weeks to reach the lonely posts in the Mackenzie basin district are now delivered promptly within a day or two, while travelers may reach their destination with ease and comfort instead of "mushing" for weeks behind a dog team.

Two Fairchild aircraft of Dominion Explorers, Ltd., in charge of pilots Sutton and Broatch, were lately engaged in exploration work in the subarctic regions surrounding Hudson Bay. Their main base



RESOURCEFUL AIRMEN INVENTED THE "NOSE HANGAR"

These little frame buildings with unboarded fronts, curtained with canvas, make engine work endurable in the most severe weather. The only difficulty is that at times of high wind the planes may act like the camel that thrust its head into the tent.



THAWING OUT AN ICE-COVERED ENGINE REQUIRES INGENUITY

Even after being submerged in the Ashuapmuchuan River and frozen in, Captain Saunders's monoplane was soon put into condition to fly again (see text, page 608).

was at Tavanne Bay (latitude, 62° 04'), on the west coast of Hudson Bay, and the new planes were flown to that place in July from Amityville, Long Island. Many trips were made by both craft to the end of steel, on the Hudson Bay line, via Churchill, to ferry in supplies, prospectors, and camp equipment.

On September 3 Captain Sutton, with two prospectors, left Tavanne Bay for Baker Lake, a cross-country flight of approximately 200 miles, over country totally unexplored. Owing to the erratic behavior of the compass in these latitudes, the course was steered by the sun. Many flights were made from the base, on Baker Lake, to the other lakes in the territory, as far north as the divide, to Wager Bay.

Captain Sutton met very high winds and heavy seas, which made operating difficult. There is little shelter at Baker Lake. On one occasion his pontoons were punctured and he had to beach his plane. Doing this with no facilities and with the water temperature 34° was no small task.

Equinoctial gales raged between September 18 and 24. Sutton was stormbound at Ranken Inlet with a party of prospectors. The gale reached 80 miles an hour, with an average of between 40 and 50 miles. Much trouble was met in keeping the craft fast to its moorings. The party was living in tents on an exposed shore, which did not make for comfort.

TINY PLANES PROVE THEIR WORTH

After the gales, abnormally high tides flowed, some 15 feet higher than the average, on Chesterfield Inlet. Captain Broatch's monoplane broke from her moorings and was beached 15 feet above the normal shoreline. Fortunately, there is an abundance of kelp in the inlet, and a runway was made by improvising a kelp mattress between the stranded aircraft and water, down which the aircraft was taxied under its own power. The party had an exciting time, as the tide reached the camp. Thirty drums of gas, canoes, and various other pieces of equipment were all afloat and had to be rescued from the ice-cold water before they drifted out to sea.

For short trips, with small loads, in the country about Chesterfield Inlet, a light plane had been brought in by a schooner. This proved once more the value of the ubiquitous British light airplane, such as the De Havilland Moth and the Avro Avian, which have flown even to Australia and South Africa. They are now much employed as auxiliary transports in this new air game and are the standard machines in northern Ontario, Manitoba, Saskatchewan, and Alberta for fire patrols and light transportation. They fold and are easy to handle, on skis, floats, or wheels. They are cheap to operate, while they carry a fair load and use little gas. For short-range work in the vicinity of a base, nothing has been made with wings which can take their place.

"NOSE HANGARS" ARE PECULIAR TO CANADA

Sutton and Broatch were ready to leave for the south when, in October, word came by wireless that the ice had made on the lakes south of Churchill. This was unusual, as the lakes farther north were still open. An immediate return was impossible, and on the 15th of October the machines were drawn up on the beach and the pontoons replaced by skis. That evening there was a good fall of snow, and the aircraft were moved up to a flat plateau behind the camp. "Nose hangars" were constructed, so that the engines might be overhauled in comfort.

This distinctive form of hangar is peculiar to Canada. It is a small tent or frame building, about 12 or 15 feet square, of which three sides and the roof are boarded up and the front closed with a canvas curtain. The nose of the aircraft is drawn into the shelter and the front curtains are made fast around the bow of the fuselage. A stove can be placed in the building and work undertaken on the engine with a fair degree of comfort and efficiency. These nose hangars, usually constructed on skids so that they may be moved from place to place, have become a feature of all temporary flying bases in the north.

On November 22 both Fairchilds were flown south to the end of steel, on the Hudson Bay line, and then, via The Pas, to Winnipeg for their winter overhaul.

Captain Sutton reports ice conditions on that date on Hudson Bay, as seen from 7,000 feet above the western shore, as follows:

"All bays and small inlets frozen; along

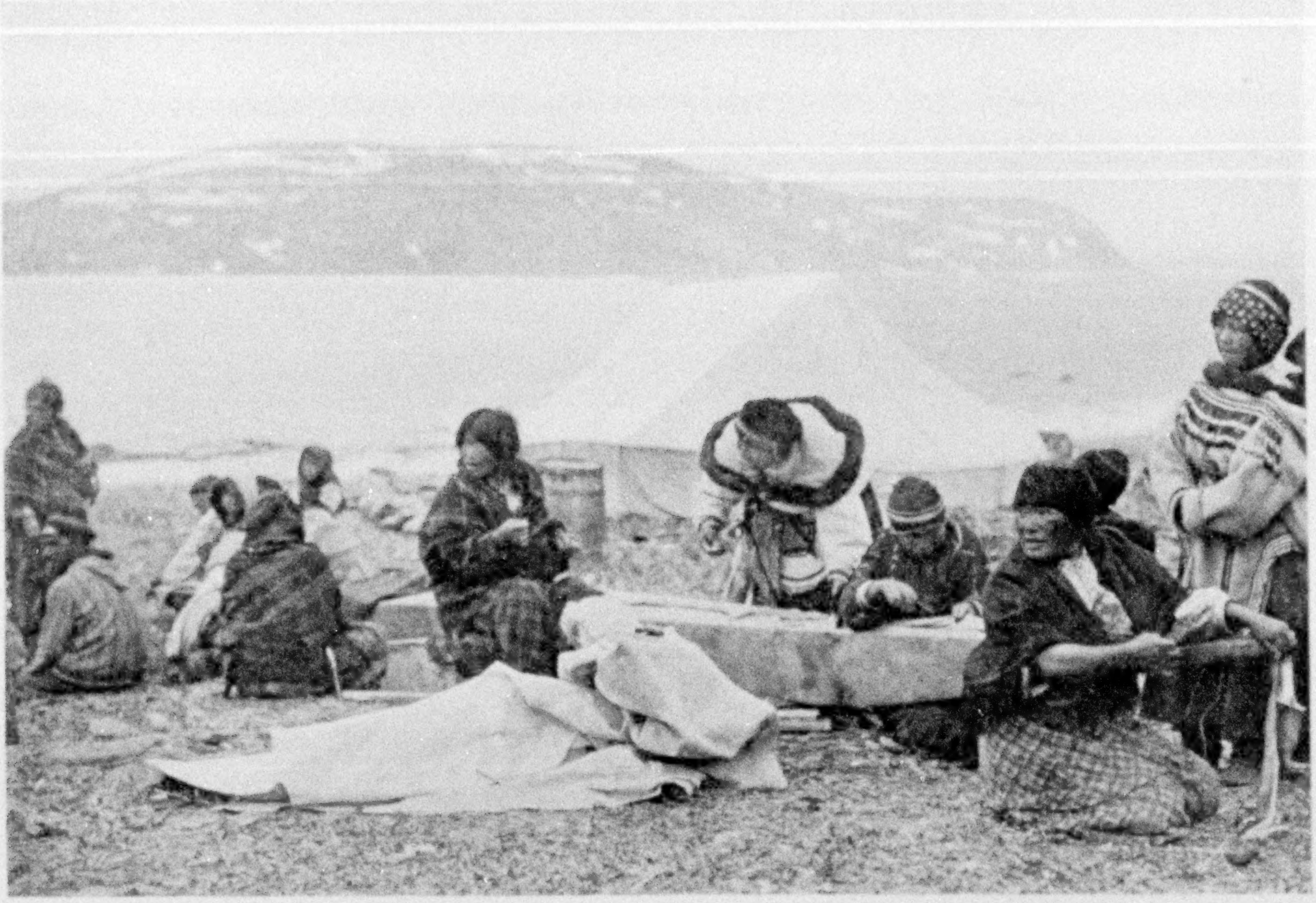
BEYOND BROCHET LIE THE BARREN LANDS

This port on the Saskatchewan and Manitoba boundary is near the limit of timber. From the air the desolate nature of the wild and rugged country is apparent; yet flyers in this region have met with astonishingly few serious accidents.

the straight coast from Tavanne Bay to Cape Eskimo, frozen out for approximately half a mile; from Cape Eskimo to Driftwood Point, frozen for approximately 50 yards; from Driftwood Point to beginning of Button Bay, no shore ice; from Button Bay to Churchill, frozen half mile out. The harbor at Churchill was almost completely frozen over, with the exception of the fast water at the entrance. Large ice floes and pans could be seen offshore as far as the eye could reach."

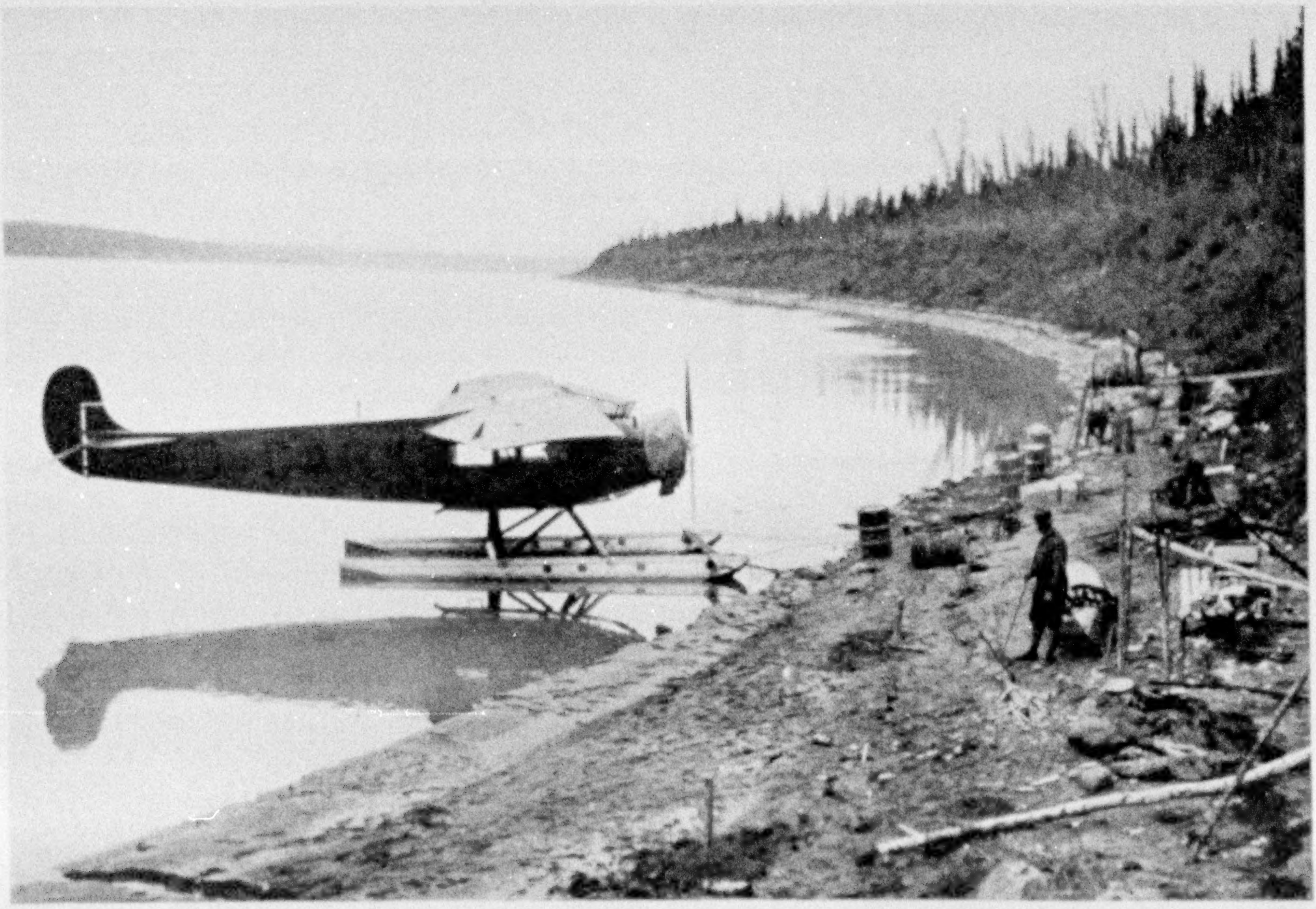
Here air navigation is difficult. The compass varies greatly, owing to the nearness of the North Magnetic Pole, and the landmarks, except on the coastline, are few. The country is a maze of small lakes and its surface is very often bare rock. There is no adequate map of the district. Several lakes more than 100 miles long were seen from the air which are not yet shown on any map. The rivers also have little relation to their courses or positions as shown on the map.

In this region, too, much difficulty was met in landing prospectors and finding safe anchorages for the planes. This is specially true on the coast. The shore is littered with large bowlders, exposed at low tide, but hard to locate when the tide is up. Very high winds were encountered



ESKIMO WOMEN ENJOY BOAT-COVERING "BEES"

The Hudson Strait Expedition reached settlements seldom seen by white men. Somewhat like a New England "quilting" is this party of native seamstresses putting the waterproof sheath on a kayak.



LIARD BASE LIES IN BIG-GAME COUNTRY

Moose, caribou, and grizzly bears abound in these virgin forests, and the streams teem with trout and grayling. From this point a flight of 200 miles was made over primeval wilderness, where there was no trace of human habitation (see, also, text, page 612).

WINTER LINGERS LATE IN CHURCHILL HARBOR

It was mid-June in 1928 when the ice went out at Fort Prince of Wales. Times of thaw are the most treacherous for aircraft landings.

almost all summer; these, accompanied by heavy seas on the bay and inland lakes, required most careful navigation and increased the difficulties of taking off and landing with heavy loads.

One further example of fine air pilotage may be given, out of the many interesting stories told by northern pilots. Captain Burge, a North Sea flying-boat pilot during the World War, operated a passenger-cabin monoplane from May to October, in northern Quebec, Ontario, Manitoba, and Saskatchewan. His mileage was about 20,000. Besides two miners, he carried a tent, three eiderdowns, a 14-foot canoe, built in sections for stowage, with a 1½-horsepower outboard engine, and food.

PROSPECTING INCREASES FIRE HAZARD

Captain Burge vividly describes the loss caused in the north by bush fires occurring far beyond the forest reserves, which are bounded on the north by the Churchill River. On one occasion his party was camped on a lake in northern Manitoba east of Reindeer Lake. Desiring to explore farther north, he left his prospectors and flew single-handed south to Cold Lake, where he had a cache of gas. Taking a full load, about 860 pounds, of spare gas and food, he flew back north some 250 miles and selected a suitable lake on which to make an advance camp. Here he deposited his cargo and left to pick up his partners.

On the way south he ran into thick smoke, which, after about 20 miles, became so bad that all view of the ground was obscured. It was impossible to make a landing, as the surface of the lakes could not be distinguished from the forest surrounding them. Toward dusk he was fortunate enough to find a slight break in the smoke, and landed to find himself within a mile or two of a trader's shack on the east coast of Reindeer Lake.

Burge was nearly out of gas, but the trader had some five-year-old petrol, which sufficed in the emergency. Next morning the smoke lifted a little and Burge left to find his party. He had not been up twenty minutes before smoke forced him down to the tree tops. For hours he flew around, trying to find camp, sometimes absolutely

WINTER FURNISHES BUILDING MATERIAL

This Eskimo woman of Wakeham Bay has to crawl to enter her home. However, though dark and smoky, the igloo is warm.

blind and at other times over raging fires, before he finally located the camp.

This territory was devoid of all habitation. The fires had driven all the game out of the country, and therefore the Indians had departed. The presence of so many prospecting parties has notably increased the fire hazard in the north and all through Ontario, northern Manitoba, Saskatchewan, and Alberta; hence work for the forest air patrols has grown much heavier.

Burge and his party were largely self-sustaining. The lakes are full of fish, though there was little game, owing to bush fires. A steady supply of fresh fish lightened their loads considerably, but Burge does not recommend the diet. "We almost grew fins by the end of the season," was his remark.

It will be seen that the prospector in the north to-day is supplied with all conveniences and comforts of modern travel. Indeed, in the opinion of one indignant young pilot, they are spoilt. "You know old man ——," he said, mentioning the name of a well-known prospector. "I have seen him come in bearded like the pard, from a six weeks' trip mushing behind his dog team, as hard as nails and looking like nothing on earth. Now he strolls down to the air station with a fedora hat, a cigar in the corner of his mouth, a silk shirt, brown shoes and spats, and asks me to take him in to his claims near Kississing; and because, when we get there, the lake is too small to land on and we have to put him ashore on a larger one three miles away, he grumbles because he has to take a short walk through the bush!" There is still plenty of call for hard traveling in the north, however.

PHOTOGRAPHY FLIES NORTH

It is not only the prospector and the mining engineer who are flying in the north. Every agency interested in its development has taken to the air. The air surveys of the Department of National Defense in 1928 covered 65,200 square miles with vertical or oblique photographs and employed eight separate fleets of two aircraft each on this work.

The Engineering Staff of the Department of Railways and Canals has two aircraft of its own and took 180 laborers into Churchill from the end of steel, at Split Lake, in the spring of 1928. They were required to build wharves for the accommodation of the steamers due to arrive in August and September with cargoes of material and men for the construction of the port and railway terminals. To take them in on the ground would have meant a walk of 170 miles across a frozen, uninhabited waste. By air, with the planes making two trips a day, they were carried in four at a time, and in three weeks they were all at work without any trouble, delay, or loss of time.

The assistance of the Air Service has also been required in helping to clear up the question of the navigability of Hudson Strait. Three air bases were established during the summer of 1927—on the southern shore, at Port Burwell, near the eastern entrance; Wakeham Bay, halfway through, and Nottingham Island, at the western approach.

CREW HAS TO ABANDON PLANE ON ICE

Two Fokker Universals, fitted for flying on wheels, skis, or floats, were stationed at each base, and flying was carried out, whenever weather permitted, for 15 months. The mother ship carried a Moth seaplane, with wings folded, so that she could be lowered into the water at any time. She was carried for use as a scout and was invaluable in the location of the bases. She was lost, however, while lying at her mooring, in a sudden gale which overwhelmed the tiny seaplane.

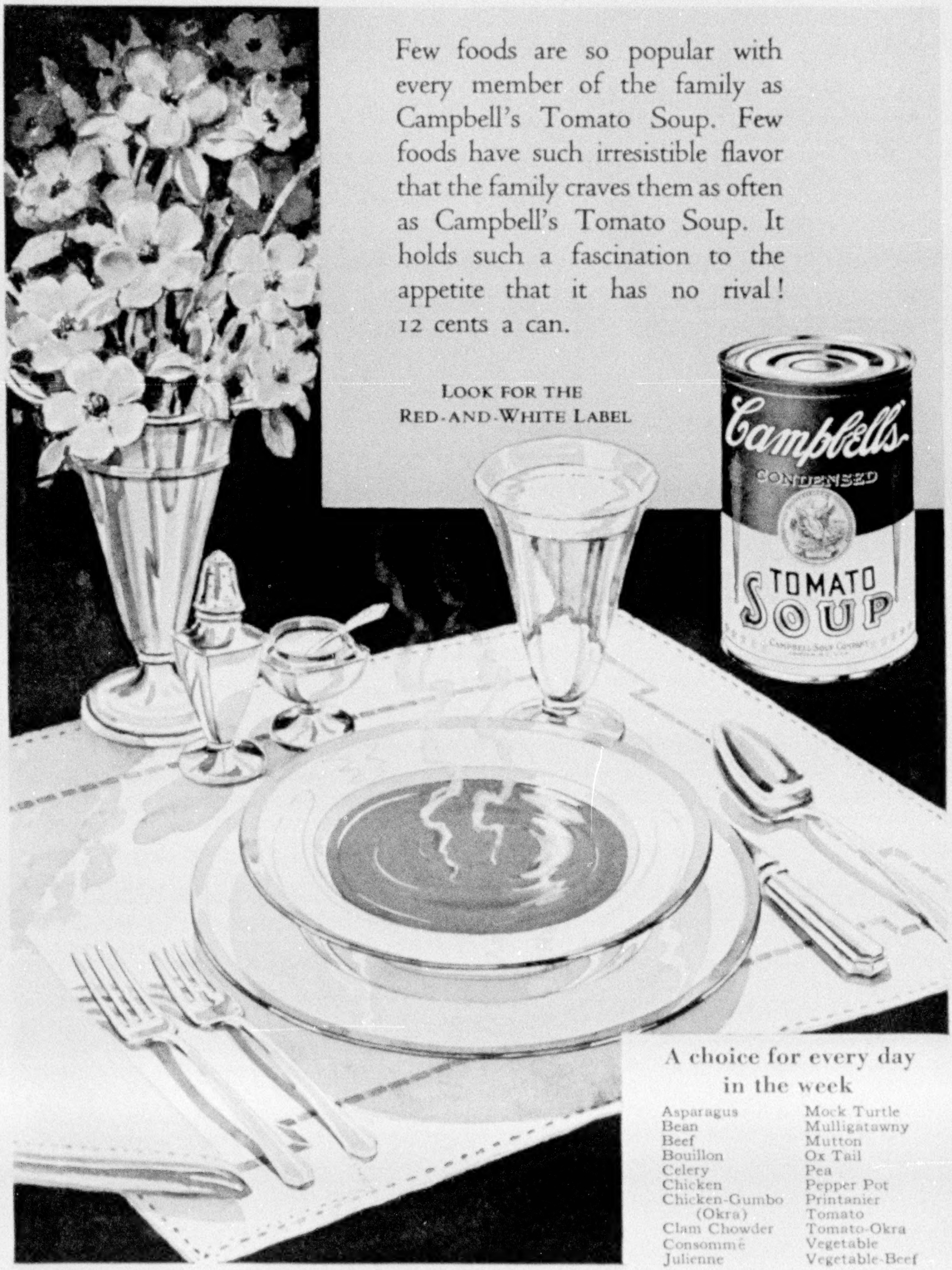
The only other loss was that of one of the Fokkers, caught with its crew while returning from a patrol across the strait from Resolution Island, toward its base, at Port Burwell, on February 17, 1928. In the poor visibility the pilot failed to appreciate the strong easterly drift, which carried him past the long, narrow peninsula and chain of islands forming the southern shore of the eastern gateway to the strait. He was forced to land on the floe ice of the North Atlantic and abandon his plane; but happily he and his party made their way safely to the coast, after many days' hard walking over broken Arctic ice.

These patrols were arranged so that the movement and formation of ice in the strait could be observed at all seasons. The expedition was led by T. A. Lawrence, a veteran pilot of the World War, with long experience in northern flying in Canada, and under him were seven officers and twenty-one men. The whole party returned safely to civilization on November 14, 1928, having gathered much valuable information. The tale of their operations on these rocky and barren shores, where the tides are high and the current runs swiftly, is a fascinating one, as was to be expected. Many difficulties and dangers were encountered and much experience was gained which should be of value to the future of organized flying in the Arctic regions.

Volumes could be written on the work of the new generation of these gentlemen adventurers of the northern skies. They are fitting successors in the long chain of descent reaching back to Henry Hudson and other explorers, and in hardihood and resolution they rival their predecessors. In the exploration of the north, the services of Canadian pilots in time of peace are a fitting complement to their remarkable record in the World War.

◆

Why this soup is every family's favorite!



Few foods are so popular with every member of the family as Campbell's Tomato Soup. Few foods have such irresistible flavor that the family craves them as often as Campbell's Tomato Soup. It holds such a fascination to the appetite that it has no rival! 12 cents a can.

LOOK FOR THE
RED-AND-WHITE LABEL

A choice for every day in the week

Asparagus
Bean
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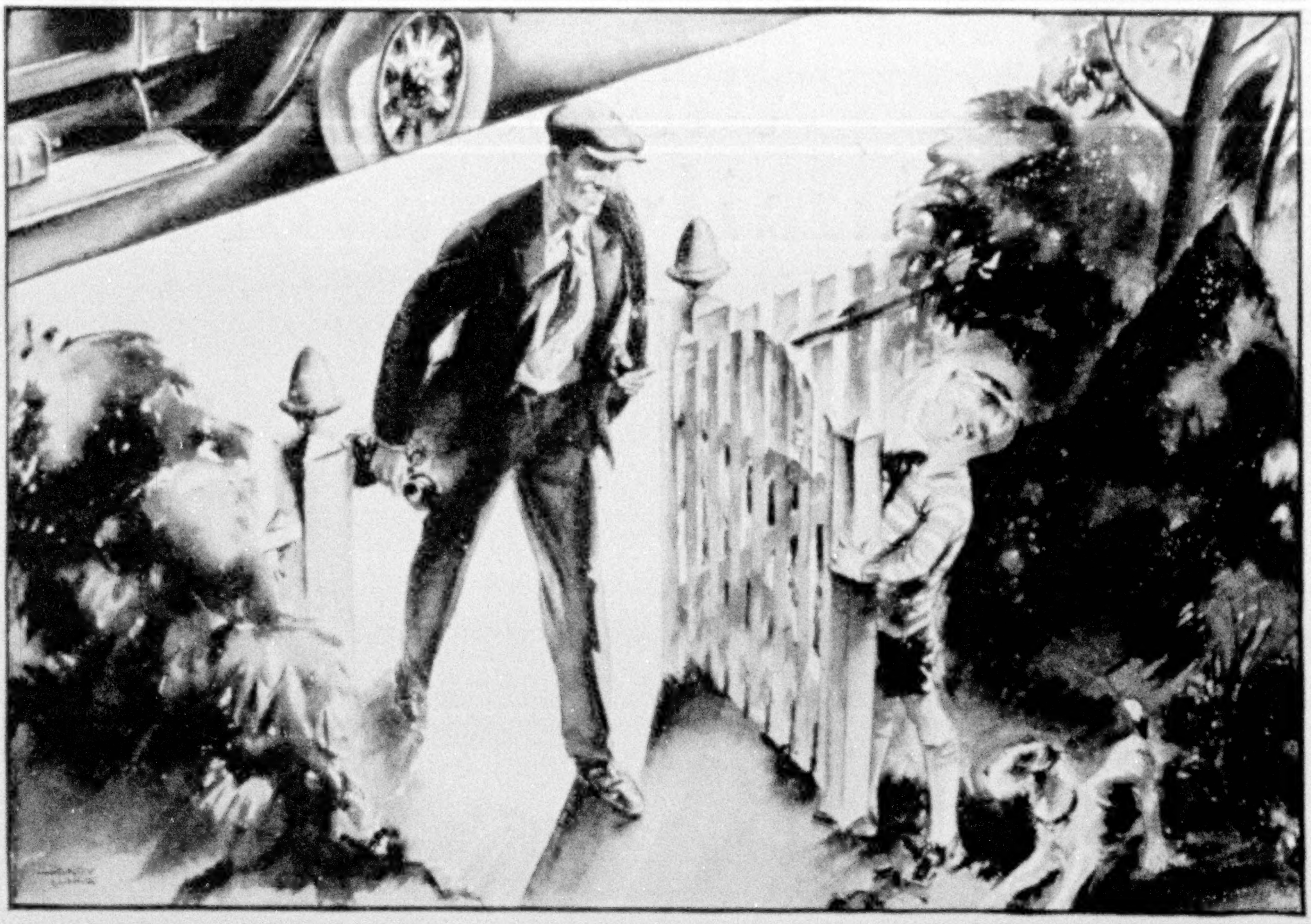
Bouillon
Celery
Chicken
Chicken-Gumbo (Okra)
Clam Chowder
Consommé
Julienne
Mock Turtle
Mulligatawny
Mutton
Ox Tail
Pea
Pepper Pot
Printanier
Tomato
Tomato-Okra
Vegetable
Vegetable-Beef



800,000 ADDITIONAL TELEPHONES ARE GOING INTO USE THIS YEAR

A million and a half dollars a day

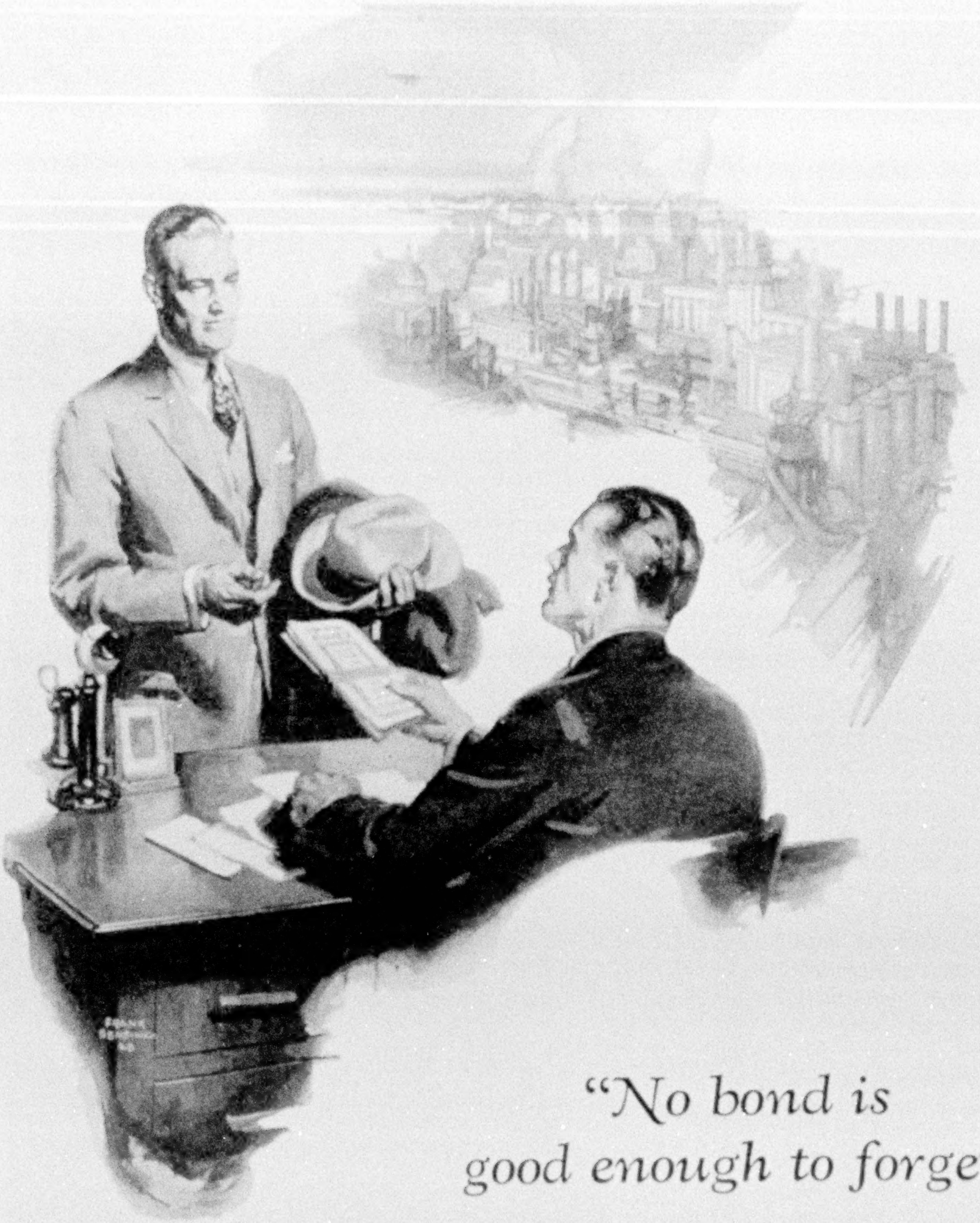
An Advertisement of the
American Telephone and Telegraph Company

More than 200 new Bell telephone buildings are going up this year in the United States, 800,000 additional telephones are going into use and new switchboards to care for 3,000,000 additional calls a day. Thousands of miles of new cable, millions of miles of wire, new carrier systems, vacuum tubes and loading coils.

These are a few of the things in the 1929 construction and improvement program of the Bell System which will cost more than 550 million dollars—a million and a half a day.

Telephone growth is essential to the new American civilization of better opportunity for the average man. The Bell System employs more than 400,000 workers, is owned by 450,000 stockholders, and serves the people of the nation.

Every day the Bell System is extending its lines to more people, increasing the speed and accuracy of its service, giving greater comfort and convenience in telephone use. All of this is done that each individual may get the most from this means of all inclusive and instantaneous communication and that the nation may be one neighborhood. This is part of the telephone ideal that anyone, anywhere, shall be able to talk quickly and at reasonable cost with anyone, anywhere else. There is no standing still in the Bell System.



"No bond is good enough to forget"

Even the best of bonds are sometimes weakened by unfavorable changes in economic conditions. Certain bonds may be less desirable for you today than they were when purchased, because of changes since in your own personal investment needs. These are reasons why you should check over your holdings occasionally with competent advisors.

At National City offices in over fifty American cities you will find experienced bond men ready to advise you on new investments and on the suitability of your present holdings. They may be able to suggest revisions in your investment list which will improve your security or increase your income without sacrificing any investment quality you really need.

Our current list presents a wide choice of investigated issues. It will be sent upon request.

The National City Company

National City Bank Building, New York

Offices or representatives in the principal cities of the United States, Canada, Europe, China, Japan, India, Australia, South America, Central America and the West Indies.

Your *face* knows it's winter..

And so does your Gillette Blade, for it has extra work to do

THE biting winds of winter contract your skin, make it rough—hard to shave. Your razor then has a far more difficult job to do than it has in summer.

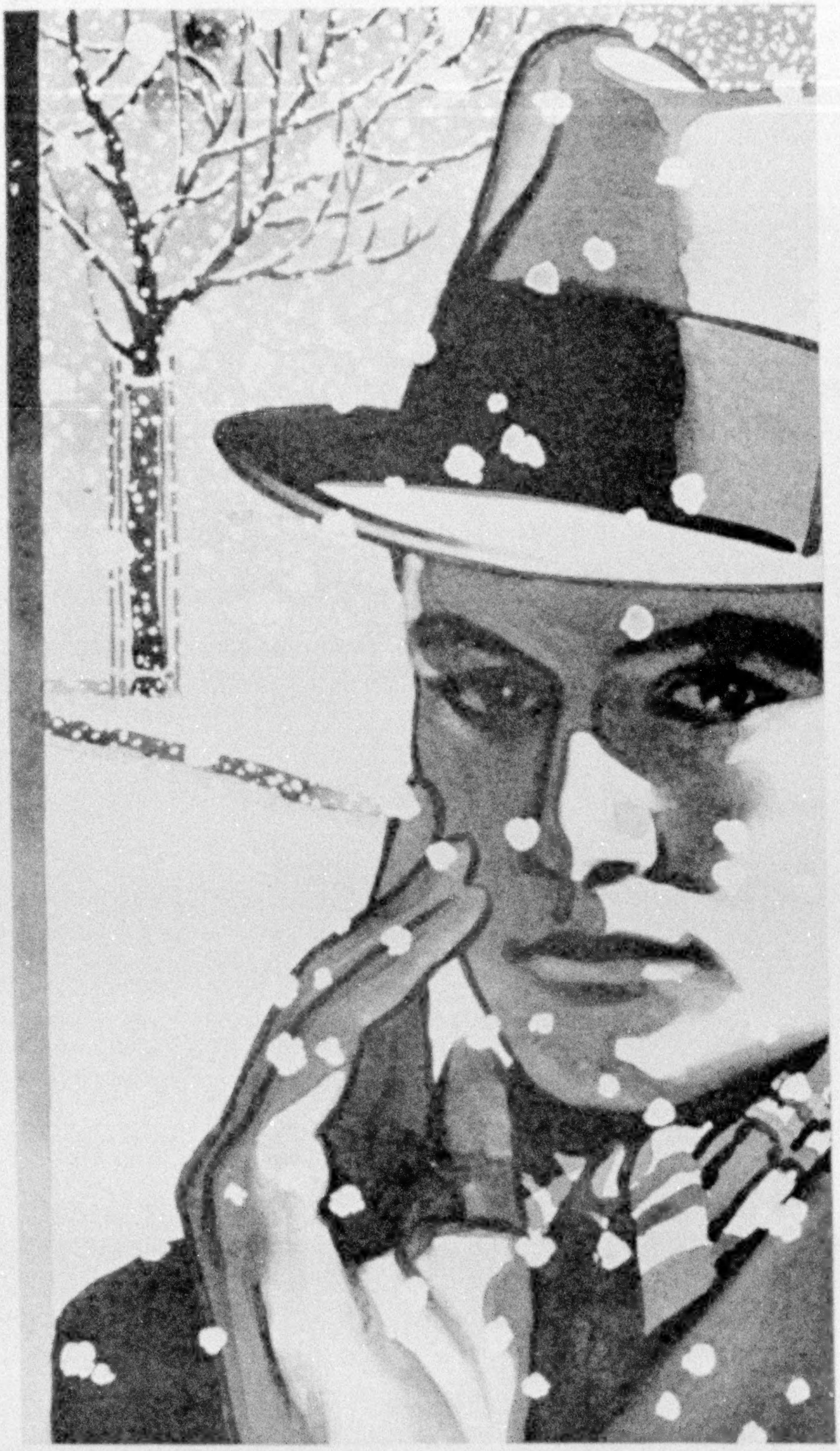
Yet you can always get a comfortable shave, no matter what the weather does to your face. Why?

Because your smooth, sure Gillette Blade never changes, under *any* conditions. It can't. Machines, accurate to one ten-thousandth of an inch, ensure its even precision.

Four out of every nine employees in the Gillette blade department are skilled inspectors who actually receive a bonus for every blade they discard.

You may not wear the same face in November that you do in May, but count on Gillette Blades to shave you smoothly, swiftly, surely. They keep your face feeling young, and looking it. Gillette Safety Razor Co., Boston, U. S. A.

★ Gillette ★



There's a lot of difference between the cold, wind-stiffened skin of late autumn and the tanned, freely perspiring face of July—and it makes a lot of difference in shaving. Yet it's easy to enjoy shaving comfort all the year round. Simply take ample time to soften your beard. And use a *fresh* Gillette Blade frequently.

King C Gillette

THE only individual in history, ancient or modern, whose picture and signature are found in every city and town, in every country in the world, is King C. Gillette.

This picture and signature are universal sign-language for a perfect shave.

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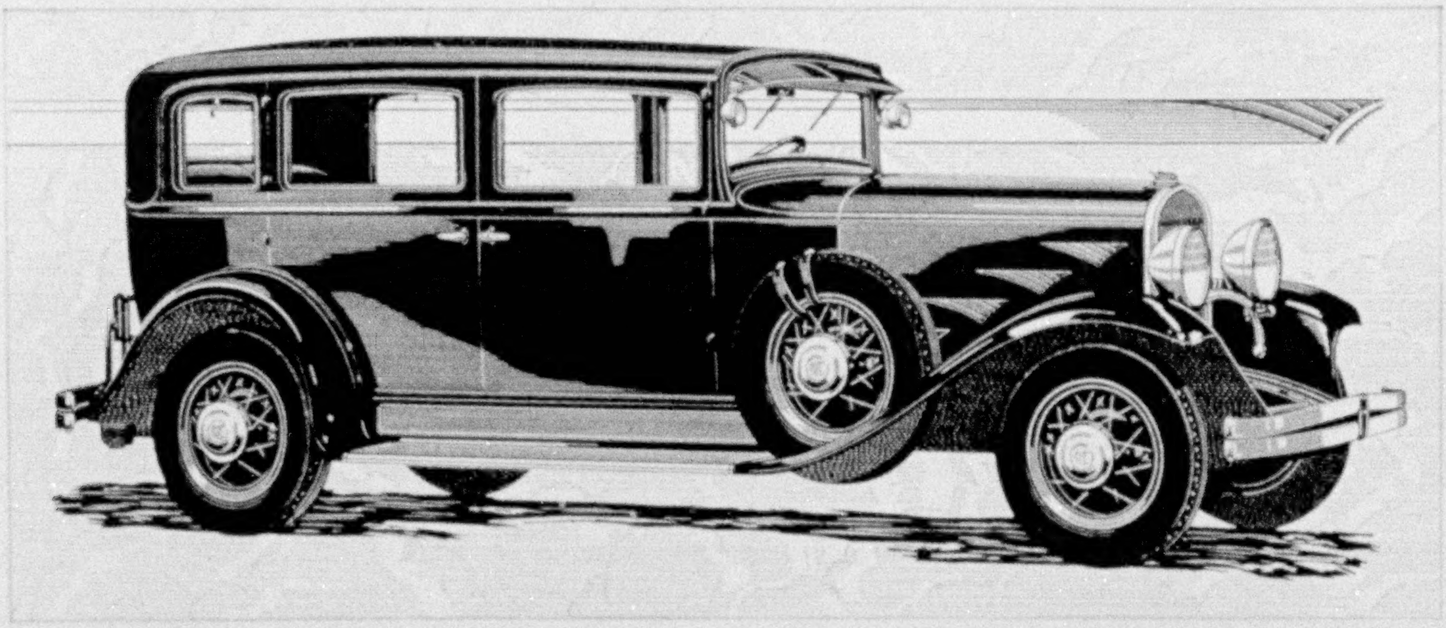
NEW CHRYSLER

PERFORMANCE THAT STANDS ALONE



New Chrysler "77" Royal Sedan, $1695 (Special Equipment Extra)

ENTHUSIASTIC endorsement of the new Chryslers is sweeping the country as added thousands learn through demonstration their new kind of performance.

The new Chrysler "77" and "70" give performance that stands alone—performance obtained by intensive study and scientific research which brought into being such new and epochal developments as:

MULTI-RANGE GEAR SHIFT—makes driving a joy and gear-shifting easy;

DOWN-DRAFT CARBURETION—first adaptation of airplane fuelization to motor cars;

SYNCHRONIZED POWER SYSTEM—co-ordinated mechanism from radiator to rear axle;

PARAFLEX SPRING SUSPENSION—new riding comfort and road smoothness; and

ARCHITONIC BODIES—longer and wider, combining "dreadnought" strength with smartness, style and luxury of appointment.

Ride a block in traffic, sprint a mile, level off a single hill—and you realize that here are cars that make you master of traffic conditions. Arrange with the nearest dealer, too, for a ride in the new Chrysler "66"—lowest-priced six ever to bear the name of Chrysler—beautiful, rich, thrilling to drive, safe and sturdy.

$2895 NEW CHRYSLER IMPERIAL — Nine Body Models priced from $2895 to $3855. WITH MULTI-RANGE GEAR SHIFT

$1595 NEW CHRYSLER "77" — Nine Body Models priced from $1595 to $1795. WITH MULTI-RANGE GEAR SHIFT

NEW "77"

$1245 NEW CHRYSLER "70" — Six Body Models priced from $1245 to $1395. WITH MULTI-RANGE GEAR SHIFT

NEW "70"

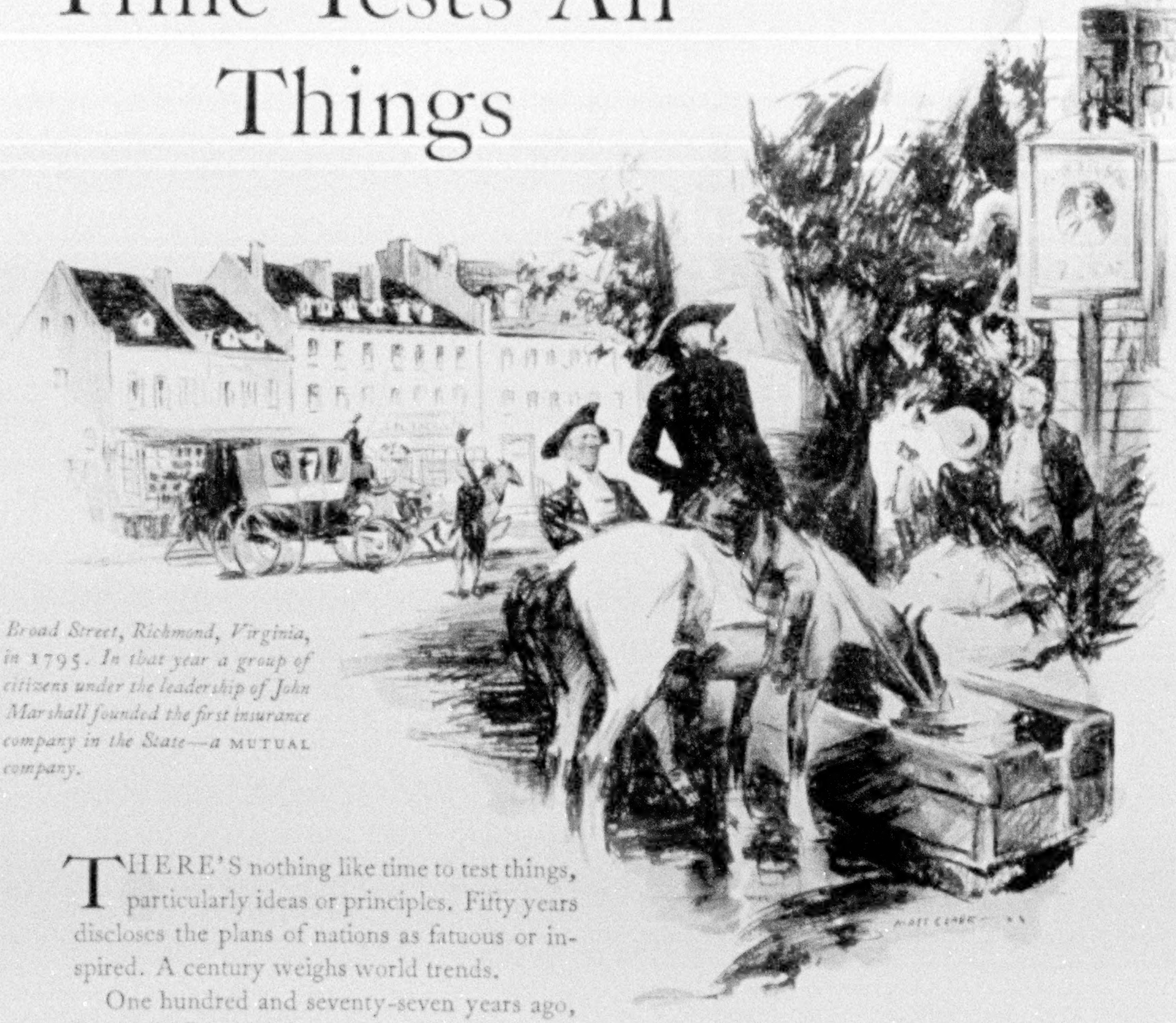
$985 NEW CHRYSLER "66"—Six Body Models priced from $985 to $1065. THE LOWEST-PRICED CHRYSLER SIX

NEW "66"

All prices F. O. B. Factory (Special Equipment Extra).

CHRYSLER MOTORS PRODUCTS

Time Tests All Things



Broad Street, Richmond, Virginia, in 1795. In that year a group of citizens under the leadership of John Marshall founded the first insurance company in the State—a MUTUAL *company.*

THERE'S nothing like time to test things, particularly ideas or principles. Fifty years discloses the plans of nations as fatuous or inspired. A century weighs world trends.

One hundred and seventy-seven years ago, Benjamin Franklin formulated the principles of mutual insurance. They have stood the test of time. The struggle for independence—the spreading out and building of the nation—the civil war—the reconstruction period—all of these with their attendant disturbances did not affect the solidity and stability of mutual principles.

All insurance is good. There is this about mutual insurance—when you buy a mutual policy you have not only all the rights of a policyholder in any other type of insurance carrier, but in addition you have the rights of representation in management and a share in the prosperity of the corporation.

These are the reasons why the majority of leading industrial corporations, and hundreds of thousands of individuals buy mutual coverage for casualty risks.

A worth-while booklet on mutual casualty insurance will be sent on request. No solicitation will follow. Address Mutual Insurance, Room 2200, 180 North Michigan Avenue, Chicago, Illinois.

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Workmen's Compensation
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A philosopher's ideas about Sleep

An interview with BERNARD SHAW

by EIMAR O'DUFFY

PERHAPS it comes to us as something of a shock, or perhaps it is only natural, to find that Bernard Shaw needs his full portion of sleep like any ordinary man.

His glorious evolutionary theory in "Back to Methuselah" of sleep as an infantile habit, still remains a dream.

"I need my seven and a half or eight hours of sleep like anyone else," said Mr. Shaw.

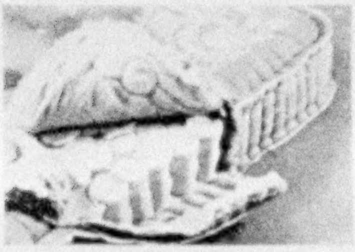
"I do not always get it now that I am old: that detested waking up in the small hours happens to me when I have been working too long. And I cannot always take the warning: then I have what I call worry dreams.

"Once in every thirty years or so I have a dream in which I am so extraordinarily happy and everything is so beautiful—as it is when one is in love—that it throws a light on what life may one day come to be.

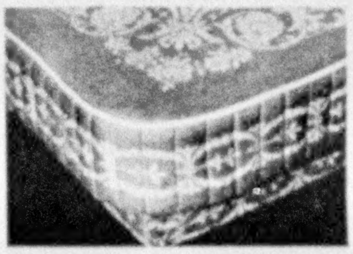
"But for workaday purposes you may take it that I am an ordinary sleeper. Some day we shall grow out of it; but for the present we must take our eight hours and make the best of them."

. . .

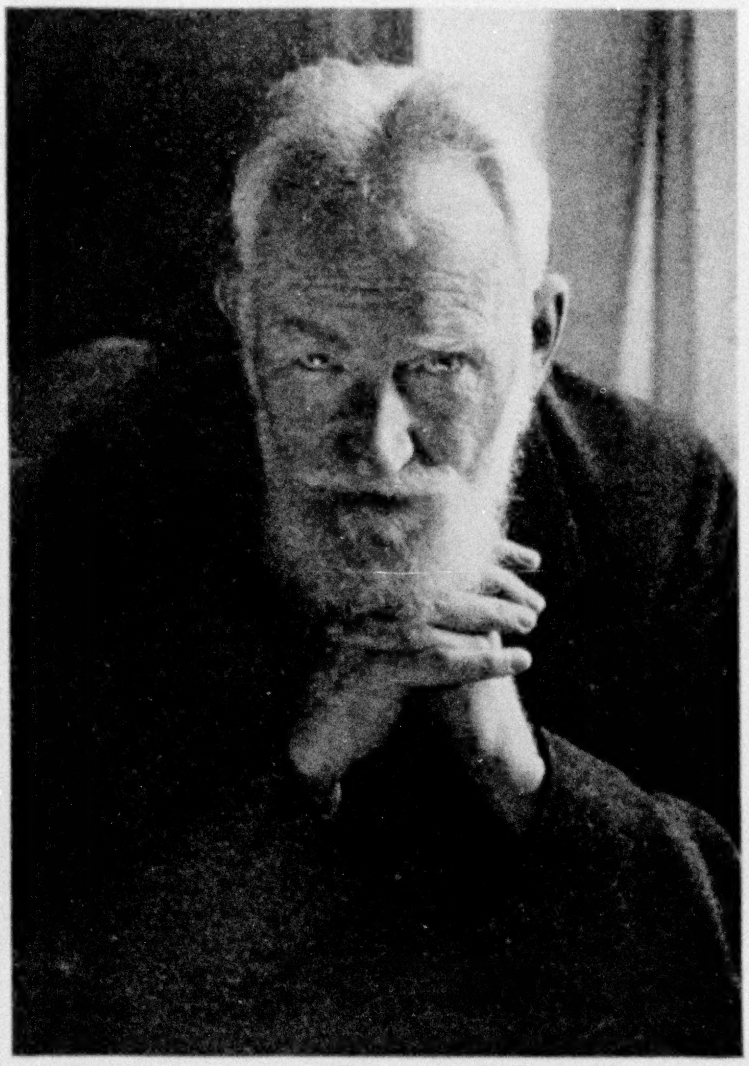
Bernard Shaw, at seventy, with that youthful, ringing voice of his, with the buoyant step and fresh complexion which men in their twenties might envy, obviously sleeps well o' nights.



Simmons Beautyrest Mattress—Hundreds of individually pocketed coils buried in upholstery. Damask cover, two patterns, six pastel shades.



Simmons Ace Box Spring—Covered in damask to match Beautyrest. Frame of seasoned lumber, steel braced; Premier wire coils.



BERNARD SHAW—*the sage of Adelphi Terrace, philosopher, novelist, essayist, scientist, playwright, vegetarian. Toppler of ideas, satirist, wit and speaker—his revolutionary teachings have astonished the world for two generations!*

•

The views on sleep expressed by a man with the rare intellectual capacity of Mr. Shaw are full of significance for all. Simmons, largest makers of beds, springs, and mattresses, have developed the sleep equipment which gives complete relaxation and induces healthful sleep. This extraordinary comfort, embodied in their Beautyrest Mattresses and new Ace Box Springs, is within reach of every income. Simmons Beautyrest Mattress, $39.50, Simmons Ace Box Spring, $42.50; Simmons Ace Open Coil Spring, $19.75. Look for the name "Simmons." The Simmons Company, New York, Chicago, Atlanta, San Francisco.

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WORLD'S LARGEST MANUFACTURERS
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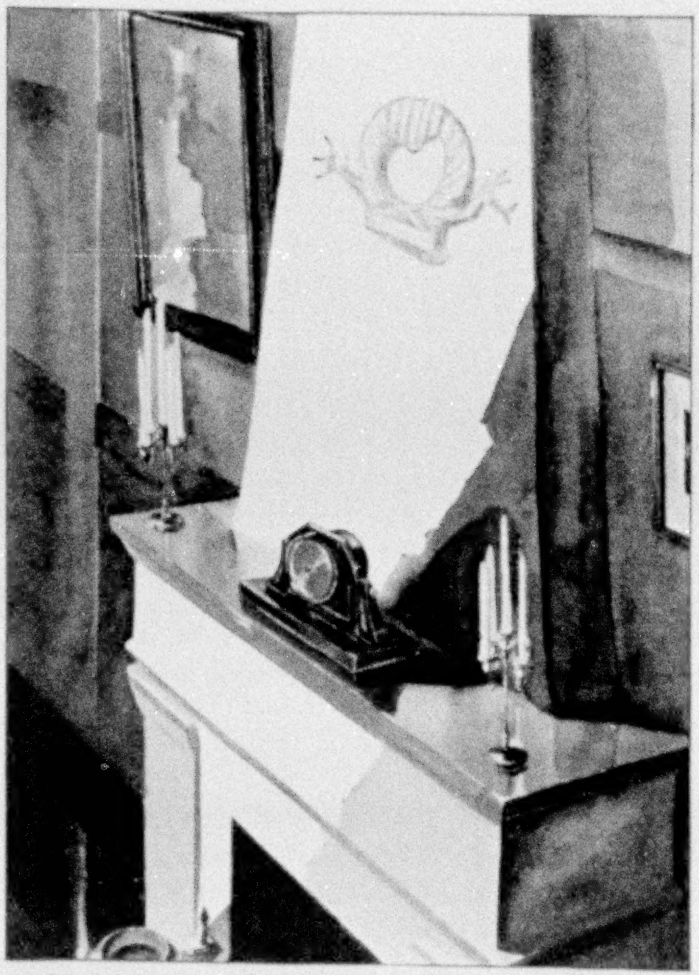
PUT THE ROMANCE OF SEVEN SEAS ON YOUR MANTEL

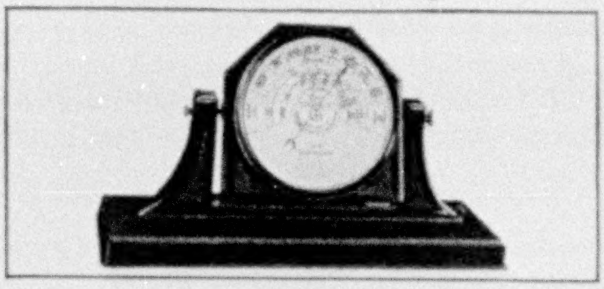
Deep-sea associations cluster about the Stormoguide, modern descendant of the old-fashioned barometer. Into any home it brings the colorful romance of far places . . . of hard-driven clippers and rusty-sided ships.

As a Christmas gift, the Stormoguide is a graceful compliment, implying a taste for the beautiful and unusual. It's useful, too. A yachtsman or golfer will be glad for this friendly weather-forecaster. In planning a fishing trip, a 'cross-country flight, or what to wear, the Stormoguide will tell what tomorrow's weather will be.

A unique gift indeed for home or office, and not likely to be duplicated. Housed in a graceful cabinet of polished walnut finished bakelite. Has 4½" gold-toned dial, good grade aneroid movement and is adjustable for uses in altitudes from 0 to 2500 feet. The Taylor Stormoguide (Standing Pattern) is priced at $15. If your dealer cannot supply you, we invite you to use the coupon below.



Taylor Stormoguide, same as above, without Stand, $10



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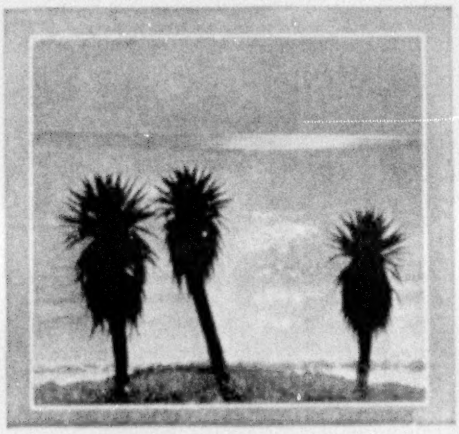
To the West...*the "Far East"*

West of California is East . . . the "Far East." Across the blue Pacific lie China and Japan. Many strange and beautiful scenes await your coming in this land of vacations and sunshine. There is the 270-mile shore line where sandy beaches alternate with rock-bound coasts. There is the mysterious desert, and desert oases where all the luxuries of civilization are at your call. There are mountains . . . rimming the horizon almost everywhere . . . culminating in Mount Whitney, 14,501 feet above the level of the sea.

There is much to see . . . and there is much to do . . . every kind of sport . . . and all the pleasures that go with city life.



Here you will see new industry, a new civilization. Los Angeles County's oil-fields present a memorable picture. The County's agricultural output approximates $95,000,000 yearly.

Come early for your winter vacation . . . come before winter really "sets in." You need spend no more than you spend at home. Play around all winter . . . outdoors. Winter here is only a name . . . flowers bloom, birds sing, oranges ripen in the valleys all winter long.

While you think of it fill out and mail coupon for the de luxe book "Southern California through the Camera." 71 large photographs in gravure . . . showing "sights" you will wish to see.

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1151 So. Broadway, Los Angeles, Calif.

Please send me your free book, "Southern California through the Camera." Also booklets telling especially of the attractions in the counties which I have checked.

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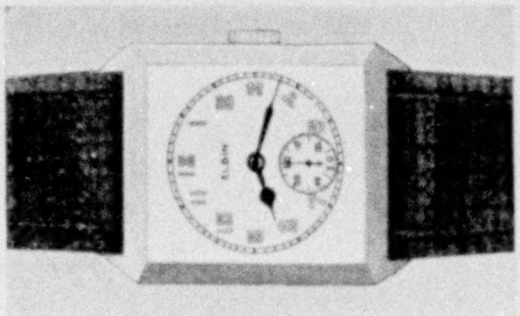
ELGIN · AMERICAN · EFFICIENCY WATCHES . . . NAMED IN HONOR OF MEN WHO HAVE MADE AMERICAN EFFICIENCY WORLD-FAMOUS

$41



NAMED IN HONOR OF HARVEY S. FIRESTONE,
17 JEWEL MOVEMENT ADJUSTED . . . $41

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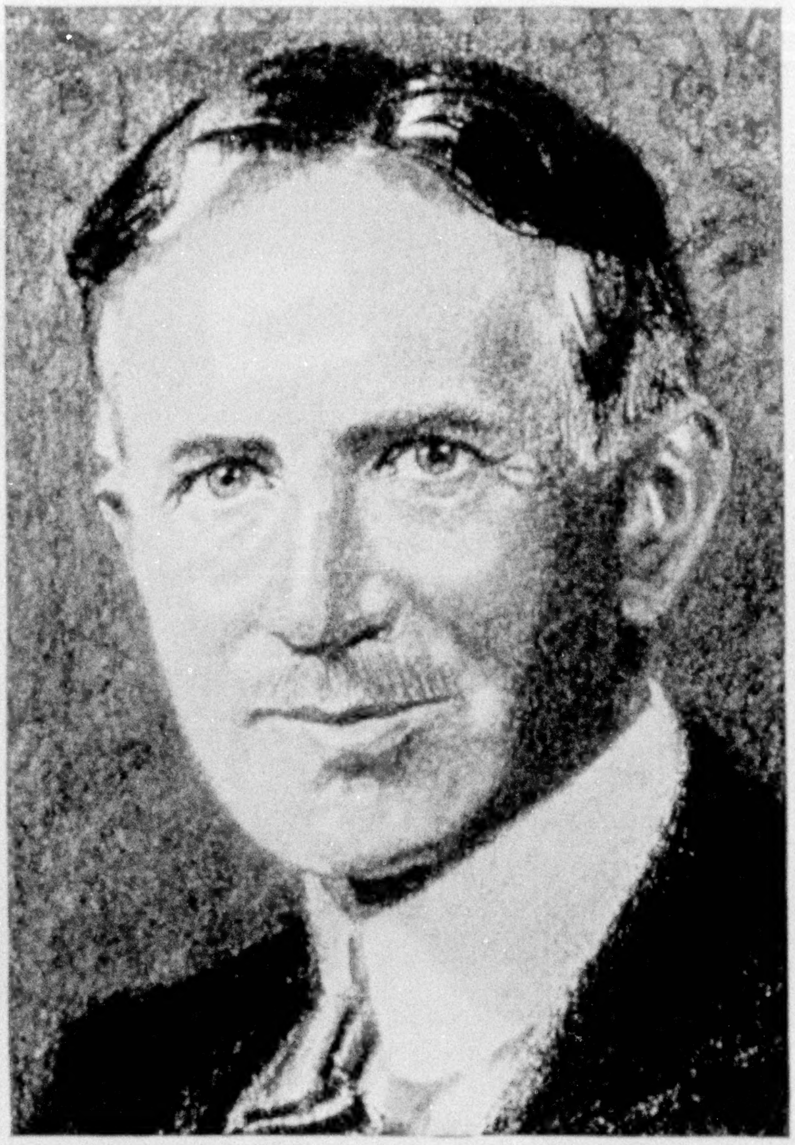


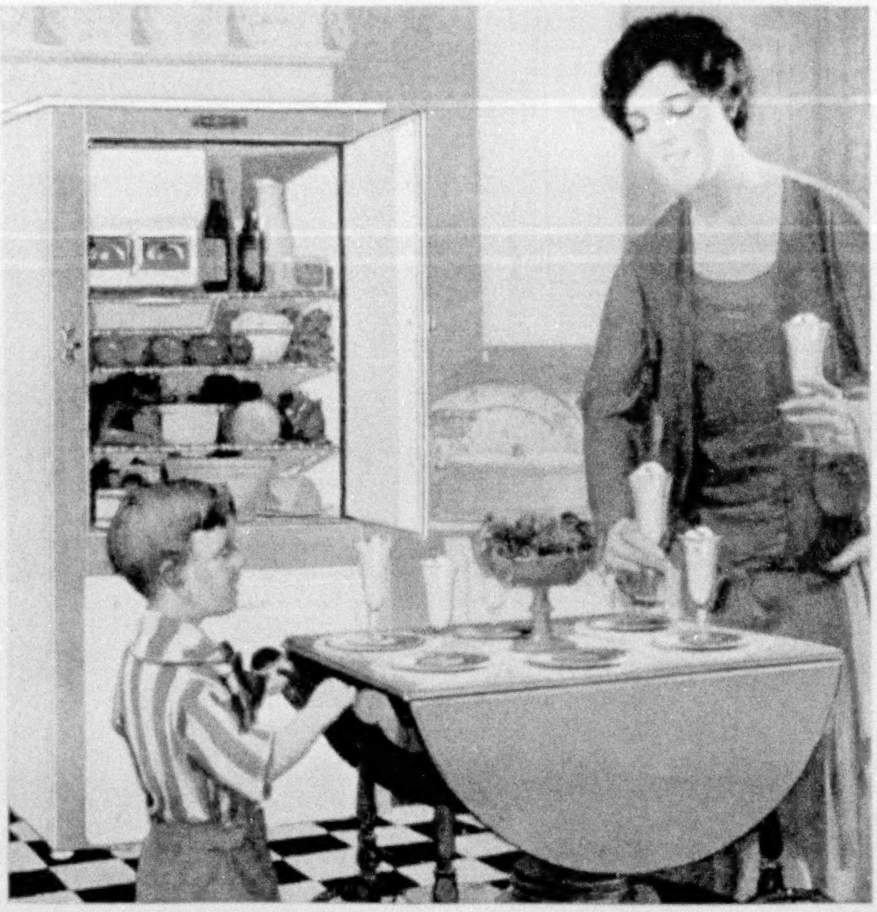
HARVEY S. FIRESTONE, PRES., FIRESTONE TIRE & RUBBER CO.

After such brilliant achievement many men might have settled back to a leisurely life, but today Harvey S. Firestone is still one of the busiest men in the world. Typifying the energy, and efficiency and appreciation of the value of time, which have crowded incredible achievement into the hours of the American business man. So one of the models in ELGIN'S new American Efficiency Series has been named in his honor. Americans know time . . . and know that time is money. So for American life this American watch. Created by ELGIN for American needs. For the needs of the busy, time-pressed man who must know the exact time to the very minute whenever he glances at his watch. The American Efficiency Series is ELGIN'S reply to the man who says his time is money. And are they handsome watches? Slender? Owning that elegance that a fine piece of jewelry should have? Just see them at your nearest ELGIN jewelers!

[Copyright Elgin, 1929 . . . . Elgin watches are American made.]

Greater power *Greater* freezing speed *Greater* beauty

the famous "Cold Control" *and all for less money*



FRIGIDAIRE

More than a **MILLION** *in use*

EVEN the lowest priced household Frigidaire now brings you the greater convenience of the "Cold Control." Instead of waiting for desserts and ice cubes to freeze at *average* speeds, you simply turn the lever of the "Cold Control." This results in intense cold in the freezing compartment . . . and shorter freezing time.

And no matter what the size . . . no matter how low the price . . . the Frigidaire you buy today has a surplus of power. Day and night you'll have refrigeration well below 50°. You can keep your kitchen as warm as you like and know that your foods are safe.

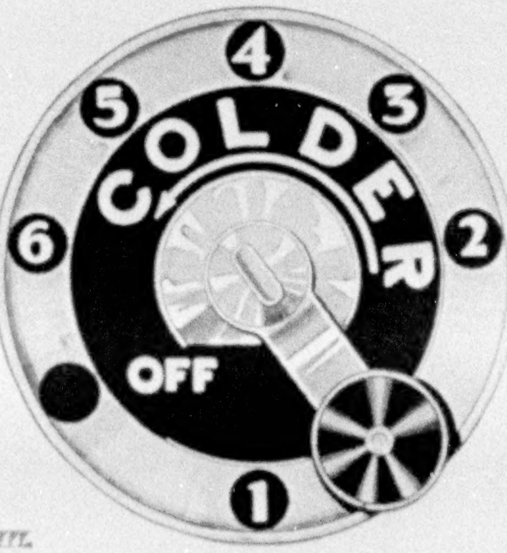
These added features actually cost you nothing. Frigidaire gives you *more* . . . but costs you *less*.

With power and safety and convenience, the new Frigidaire also brings greater beauty to your kitchen . . . exteriors of Tu-Tone Porcelain-on-steel . . . interiors of Porcelain-on-steel in gleaming white. And there is no exposed mechanism. Everything is inside the cabinet. There is nothing to catch dust or dirt. Surfaces, inside and out, are as easily cleaned as chinaware.

See for yourself the greater value offered by Frigidaire. Call at the nearest Frigidaire display room. Get the low prices. Find out about General Motors liberal terms. In the meantime, mail the coupon for a complimentary booklet that gives you facts you'll want to know about electric refrigeration. We'll also send you a copy of the Frigidaire recipe book . . . free. Mail the coupon today.

The Frigidaire "Cold Control"

Do not confuse the "Cold Control" with Frigidaire's automatic temperature regulator. The temperature regulator maintains an ideal temperature in the food compartment . . . without attention. The "Cold Control" enables you to control the temperature in the freezing compartment, speed the freezing of ice cubes and make a great variety of delicious desserts.



Frigidaire Corporation, Subsidiary of General Motors Corporation,

Dept. Y-323, Dayton, O.

Please send complimentary booklet and free copy of the Frigidaire recipe book.

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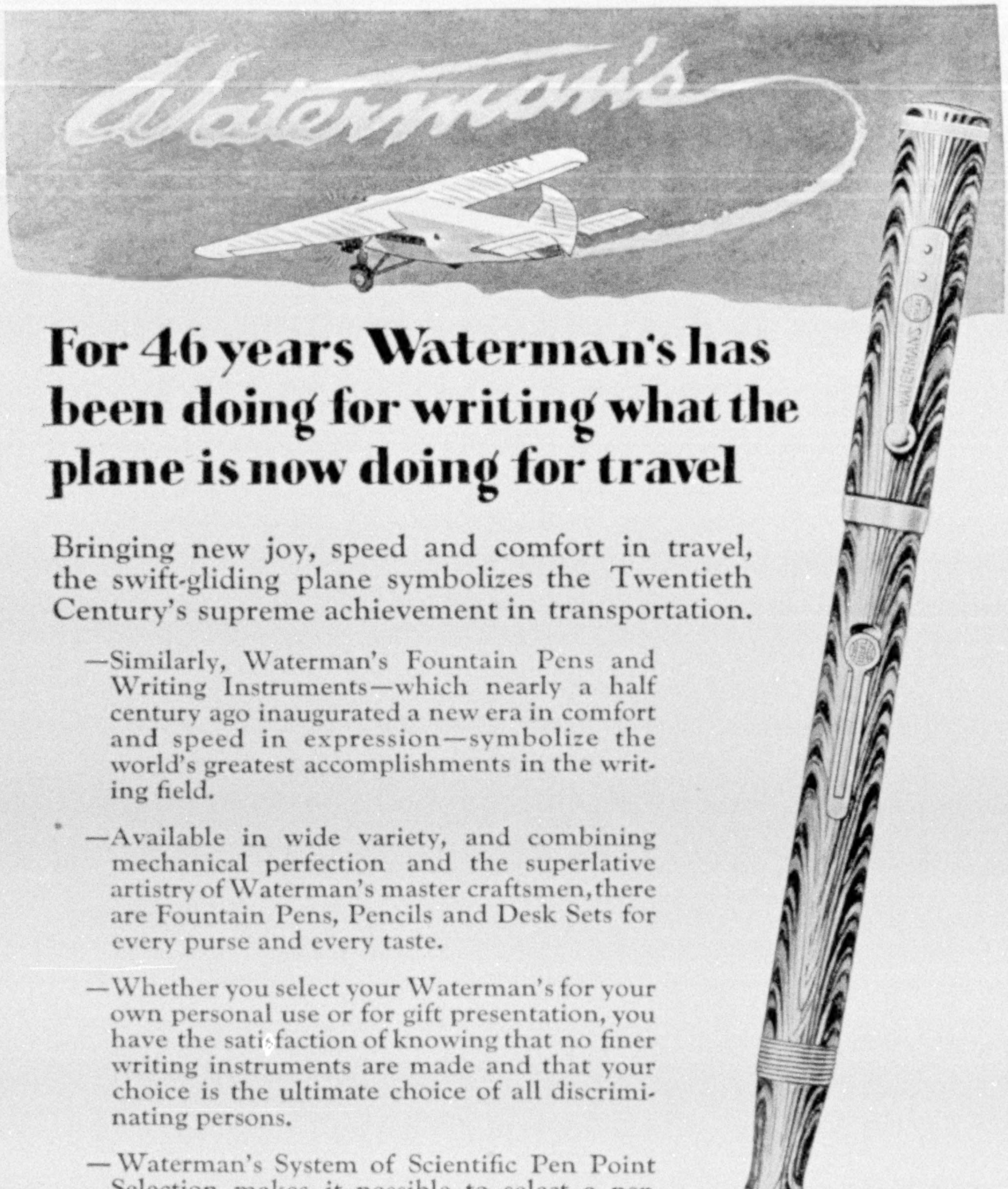

For 46 years Waterman's has been doing for writing what the plane is now doing for travel

Bringing new joy, speed and comfort in travel, the swift-gliding plane symbolizes the Twentieth Century's supreme achievement in transportation.

—Similarly, Waterman's Fountain Pens and Writing Instruments—which nearly a half century ago inaugurated a new era in comfort and speed in expression—symbolize the world's greatest accomplishments in the writing field.

—Available in wide variety, and combining mechanical perfection and the superlative artistry of Waterman's master craftsmen, there are Fountain Pens, Pencils and Desk Sets for every purse and every taste.

—Whether you select your Waterman's for your own personal use or for gift presentation, you have the satisfaction of knowing that no finer writing instruments are made and that your choice is the ultimate choice of all discriminating persons.

—Waterman's System of Scientific Pen Point Selection makes it possible to select a pen point that exactly suits the idiosyncrasies of your writing style.

Unconditionally guaranteed against defects in workmanship.

Use Waterman's Ink in Waterman's Pens

Waterman's

H 2946

FREE . . . A Priceless Tooth Paste Formula to try

The Film

that is found by dental research to discolor teeth and foster serious tooth and gum disorders.

Made to remove the dangerous film that forms on teeth—that stains teeth and is the chief source of decay and pyorrhea.

MAY we send you, free, enough Pepsodent to give far greater brilliance to your smile? Enough to show you how by removing dingy film teeth are made whiter, and serious tooth and gum disorders are combated at the source?

Of the people who brush their teeth over half know how utterly different Pepsodent is from other methods. If you do not, please return the coupon at once.

What this film is

You can feel film with your tongue—a slippery, viscous coating. Food and smoking stain that film. Germs by the millions breed in it . . . germs of many different kinds.

Film hardens into tartar. And germs with tartar are the chief cause of pyorrhea. Film is also the basis of decay.

The special way to remove it

Ordinary brushing ways are not successful in removing film from teeth. You must employ the scientific method that first curdles film so that light brushing can easily remove it in perfect safety to enamel.

You marvel at the natural whiteness of children's teeth. Yours may once again regain that color. May take on a brilliance that is actually amazing. Lustreless, dull teeth are known to be unnatural.

Test FREE for 10 days

Perhaps unattractive teeth have cost you too much in society and business. You must not delay another day in testing this method. Get a full-size tube wherever dentifrices are sold, or send coupon at right to nearest address for your free 10-day tube.

FREE–10-Day Tube

Mail coupon to

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Dept. 1911,
1104 S. Wabash Ave.,
Chicago, Ill., U. S. A.

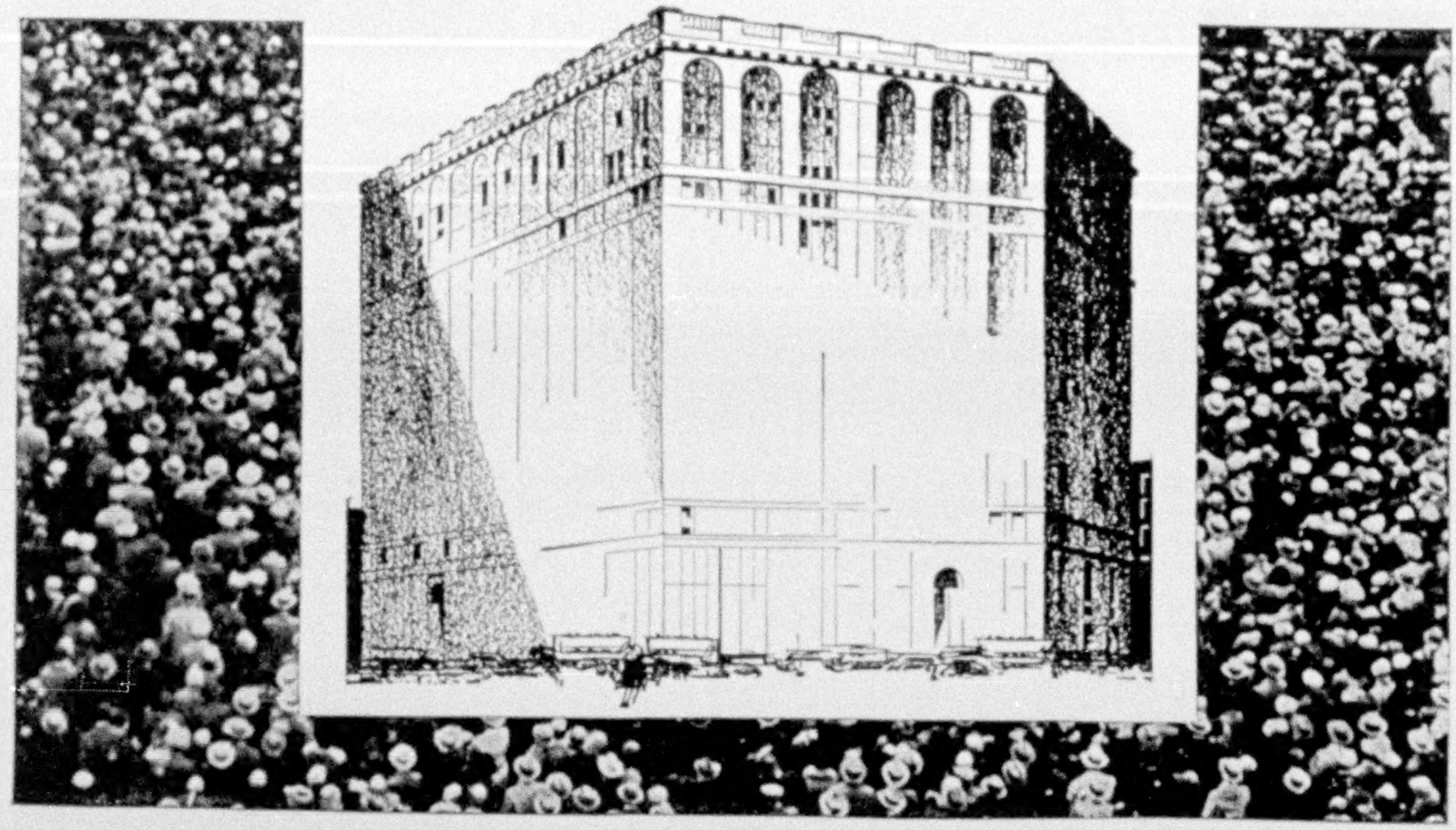
Name...

Address...

City...

Other Offices: The Pepsodent Co., 191 George St., **Toronto** 2, Ont., Can.; 8 India St., **London,** E. C. 3, Eng.; (Australia), Ltd., 72 Wentworth Ave., **Sydney,** N. S. W.

Only one tube to a family 3289



Once an address of social distinction . . . now one of business success

In the gay nineties, "200 Fifth Avenue" was known throughout the world of fashion, here and abroad. There stood the smart Fifth Avenue Hotel. Today, on this site, stands The Fifth Avenue Building, a buying center of the modern world.

The transition to business has increased the prestige of this address. Buyers from every state and from distant countries complete many of their seasonal requirements—on one buying trip—in The Fifth Avenue Building. Here are the offices and display rooms of leading manufacturers. Glassware, pottery, toys, greeting cards, stationery, novelties, fine laces, men's wear, women's wear, and kindred lines are represented in almost infinite variety.

Situated at the intersection of two great avenues of commerce, Broadway and Fifth Avenue, The Fifth Avenue Building is in the heart of New York business. The shopping district is a few minutes in one direction, the financial district in another. Grand Central Station is thirteen minutes by subway, the Pennsylvania Station, ten. Busses, surface cars, a subway entrance are at the door. An elevated line is within a block.

With an address so familiar, so convenient, it is no wonder that successful business comes to The Fifth Avenue Building. When you are in New York, ask us to show you through this building.

THE FIFTH AVENUE BUILDING

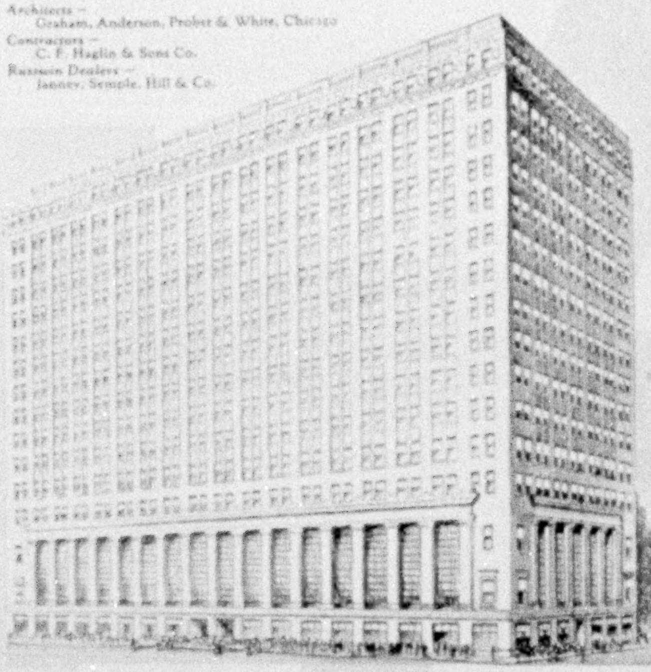
Broadway and
Fifth Avenue at
Madison Square,
New York

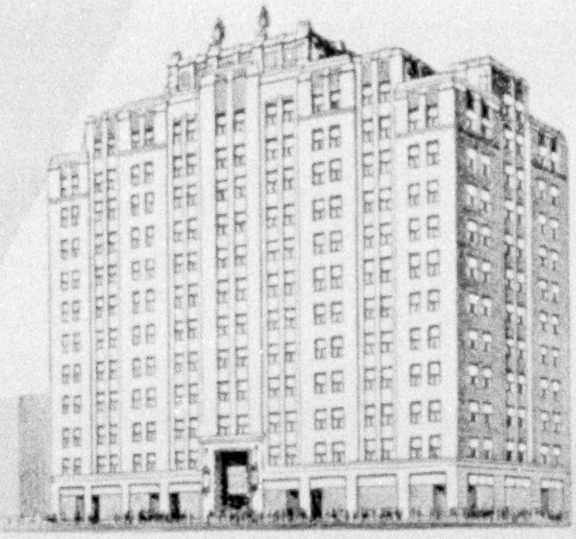
"More than an office building"

RUSSWIN *in Minneapolis*

Northwestern National Bank Building
Minneapolis, Minn.

Architects —
Graham, Anderson, Probst & White, Chicago
Contractors —
C. F. Haglin & Sons Co.
Russwin Dealers —
Janney, Semple, Hill & Co.





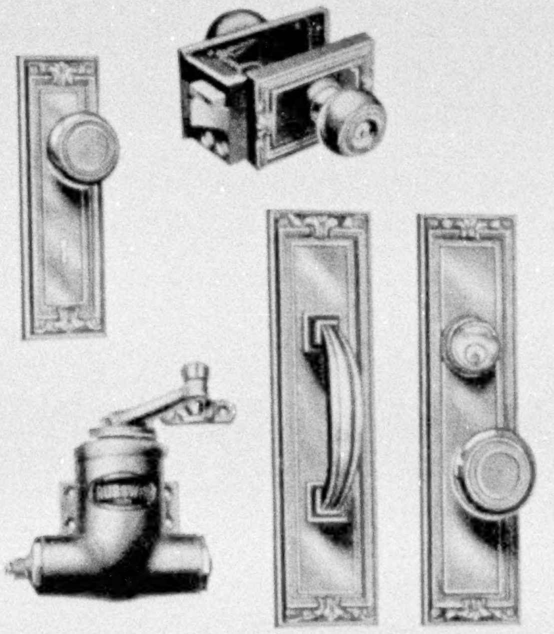
Hodgson Building — Minneapolis, Minn.

Architects - - S. N. Crowen and Associates, Inc., Chicago-Minneapolis
Contractors - Wells Brothers Construction Co., Chicago-Minneapolis
Russwin Dealers - - - Janney, Semple, Hill & Co., Minneapolis

MINNEAPOLIS, gateway to the Northwest, a progressive city of beautiful buildings, is the home of two new impressive structures to which it can point with architectural pride — the Northwestern National Bank Building and the Hodgson Building.

Both are equipped with Russwin Hardware, distinguished for originality of designs — modernistic and classic — as well as for enduring quality and the lifetime of trouble-free service which it renders.

A FEW RUSSWIN CREATIONS



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*See pages 2519-2596
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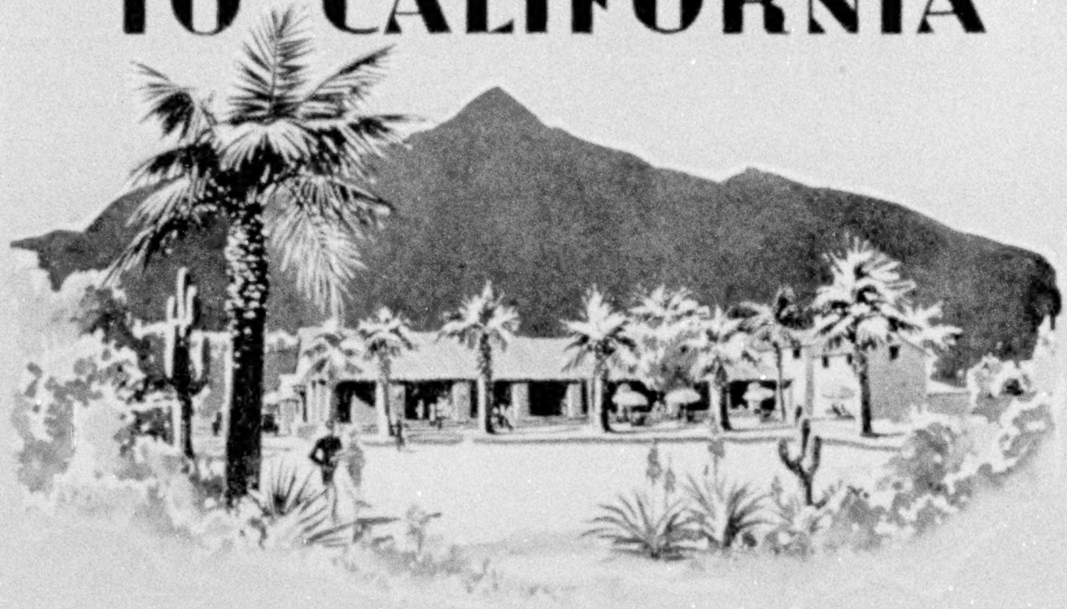

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and its archipelago of green oases — through the glorious sunshine of Arizona to California — where mountain-hemmed resorts, luxurious hotels and unique playgrounds summon the traveler to rest and recreation in a land steeped in sunshine and color. Plan to stop over.

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Please send me literature descriptive of Arizona and California and full information regarding train schedules and service via Golden State Route.

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all year . . . many years if you install
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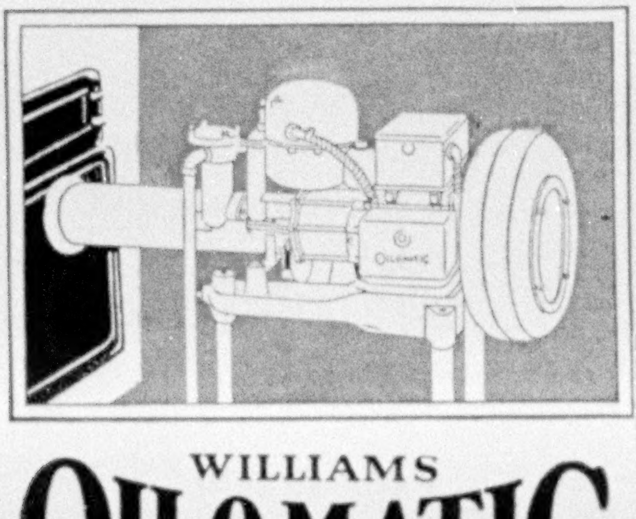
ALL year — and for years to come — your whole family will be thankful if you install Williams Oil-O-Matic heating before Thanksgiving Day. Thankful because of constant, even temperature — automatically maintained without work or worry. Delighted because colds have become rare with rooms no longer overheated or chilly. Happy because banishing dirty coal and dusty ashes makes your spic and span basement into a recreation floor. Doubly thankful because Oil-O-Matic heats with *fuel* oil — richest in heat units — lowest in cost.



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Get the Facts From Owners

More than 90,000 homes depend on Williams oil burners for efficient, care-free heating. Mail the coupon below for names of owners in your neighborhood — and for details of a special payment plan. Tear out the coupon before you turn this page.

A RADIO TREAT

Tune your radio to WJZ and NBC chain stations at 10 o'clock Eastern Standard Time each Tuesday night. Friday nights at 8:30 Central Standard Time tune in WGN, Chicago.

WILLIAMS OIL-O-MATIC HEATING
CORPORATION
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Is yours a *medium size* home? Then you can use the new lower priced Oil-O-Matic Junior! Larger homes require the world-famous Model J Oil-O-Matic.

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Williams Oil-O-Matic Heating Corporation, Bloomington, Ill.

Please send me your booklet, "Oil Heating At Its Best"— no obligation.

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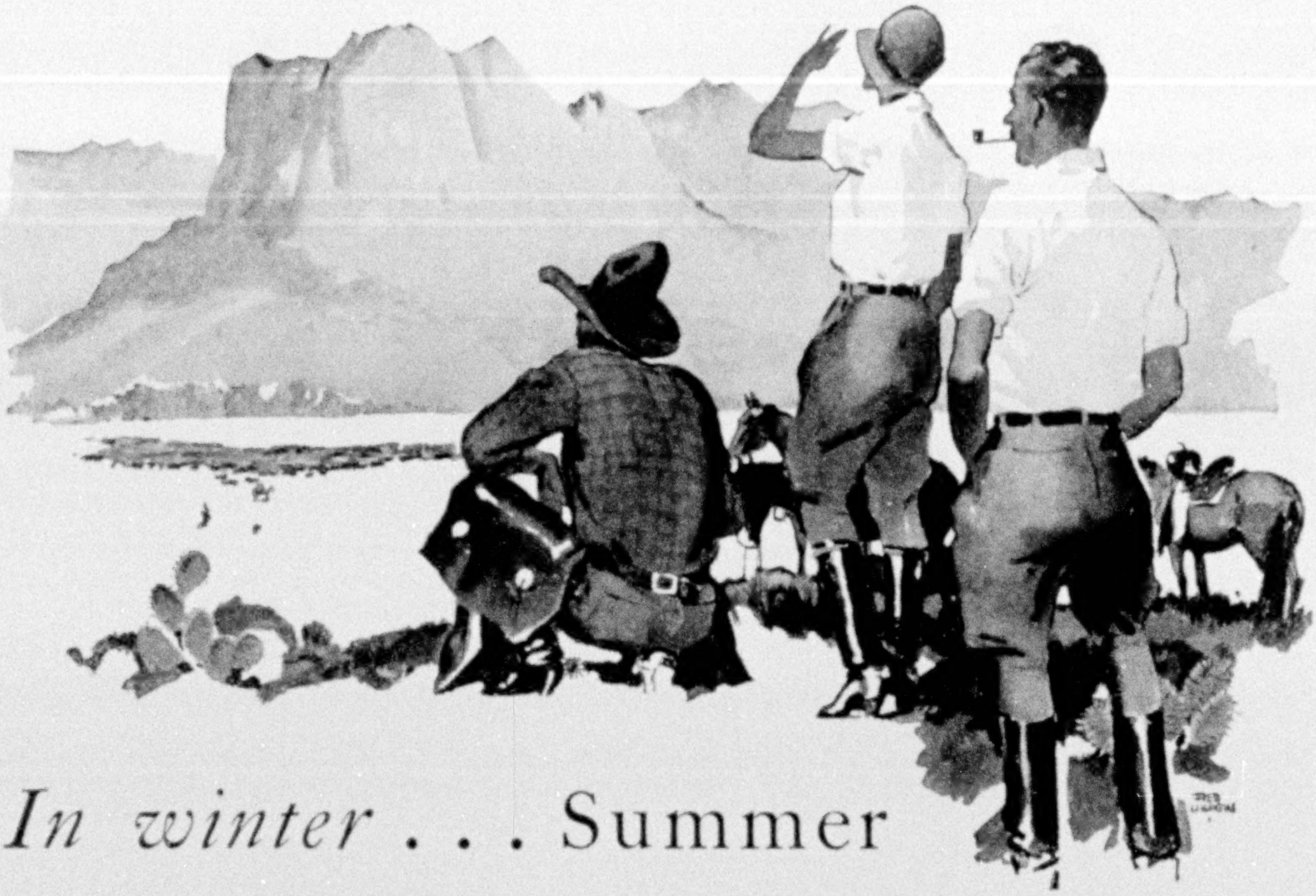


In winter . . . Summer rides herd on Arizona ranchos

"I'll show you how to put the *Sunny June* brand on old December." So writes Bill—and I believe he's plumb locoed. So crazy about his new Arizona ranch that he's after our whole crowd to come out. Says he's going to give them a taste of the real hard-riding, bronco-busting old West, like it or not.

"Bunk with the regulars in a ranch house," he writes, "or loll de luxe in a mesa hotel." He has us all labeled. "Jane and Bob couldn't live out of ring of a head waiter, so it's Phoenix for them. Ted and Marj enjoy their weakness and Old Mexico is—just across the border from Nogales or Douglas. Lazy Mary wants just a winter tan. Big game hunting for . . ."

You may not have the same tastes as Bill's friends. But you can, as thousands are doing each winter, take your Arizona as you like it. Straight and raw (yet in comfort) with real cattle ranches, roundups, trails of Apache. Or with the soft luxury of the most modern hotels.

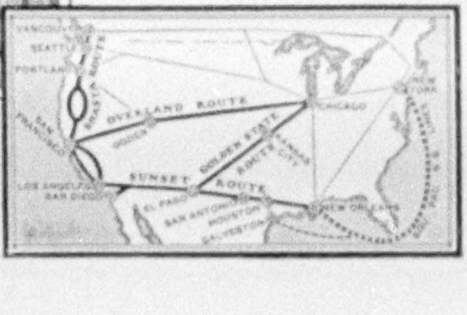
Phoenix, Tucson, Douglas, Benson, Tombstone and Globe are centers of the guest ranch activity. At Chandler, Ariz., and at Palm Springs and Indio, on the Southern California desert, are still other different winter resorts—comfortable inns of striking individuality.

Southern Pacific's Golden State Route, Chicago or St. Louis to Los Angeles, San Diego and Santa Barbara, or Sunset Route, New York and New Orleans to Los Angeles and San Francisco (both routes thru El Paso) directly and exclusively serve this spirited region. Choice of two other great Southern Pacific routes broadens the return journey. Only Southern Pacific offers choice of four great routes. Go one way, return another, and see the whole Pacific Coast.

Rooms en suite . . . every refinement of travel comfort distinguishes these trains—"Golden State Limited," "Sunset Limited."

Southern Pacific

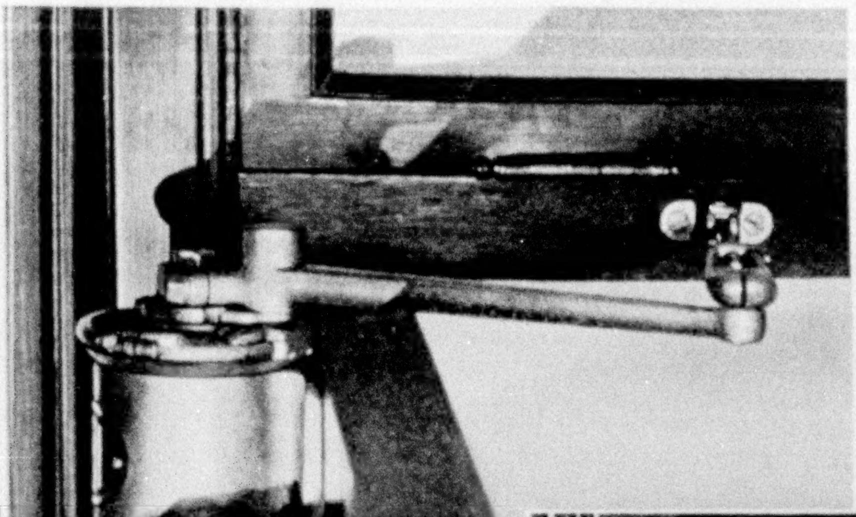
Four Great Routes



For booklets "Guest Ranches of Arizona," "Southern California Desert Winter Resorts," write to E. W. Clapp, 310 So. Michigan Blvd., Chicago, or H. H. Gray, 531 Fifth Ave., New York City.

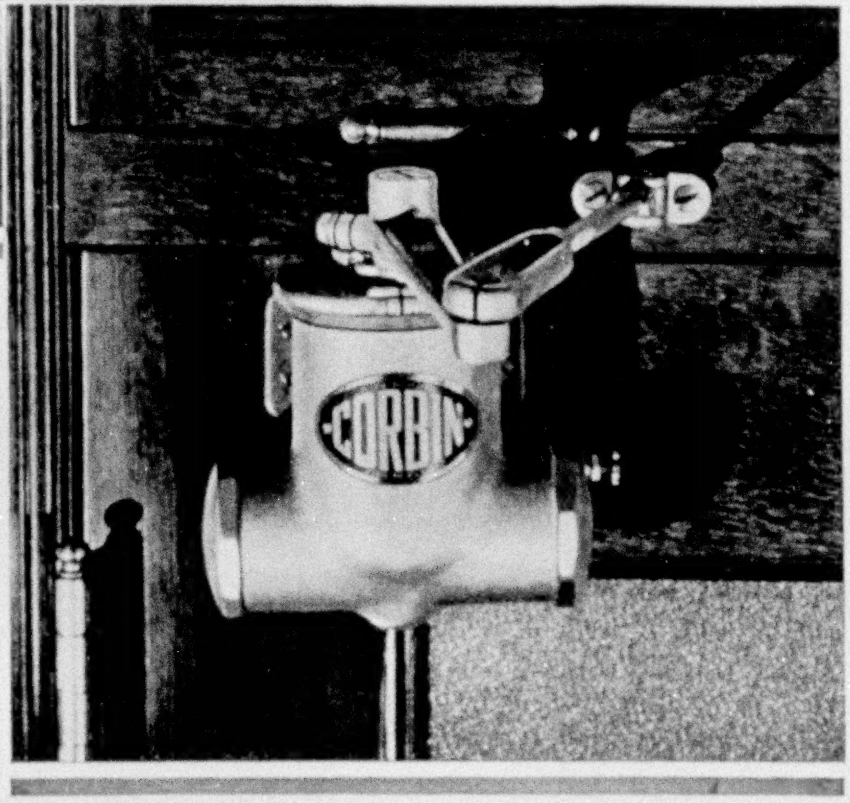
Good Buildings Deserve Good Hardware

CORBIN



All the way open—

If this is the angle at which you wish your door to stay open, a simple adjustment of the Corbin Holdback Attachment does it—without affecting the easy opening or closing of the door.



Completely—silently closed—

A touch releases the Holdback Attachment. Immediately the Corbin Door Check silently closes the door from any given angle. The Holdback Attachment operates only when you wish the door held open.

Made to *close* doors

—and also to HOLD THEM OPEN—whenever you wish

A DOUBLE service from an old friend—the Corbin Door Check. Made to banish irritating slams—to prevent doors being left open that should be closed. And to close them silently, surely, swiftly—all the way.

But suppose you want your door to remain open at a given angle—for ventilation—supervision—or some other reason? Corbin Door Checks, with the Holdback Attachment shown in action above, will do this too. By simply setting this attachment the door can be held open at any given angle you choose.

Doors that close when you want them closed. That open at the angle you wish, when you want them open. Now, that's service—the kind of service Corbin Door Checks offer!

Don't you think this added convenience of Corbin Door Checks is well worth having? It can be yours if you will just remember one word—"Corbin"—and add: "With the Holdback Attachment."

The double convenience of Corbin Door Checks is fully explained in booklet N-11. Write for it now.

P. & F. CORBIN NEW BRITAIN CONNECTICUT
SINCE 1849
The American Hardware Corp., Successor
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Native South Africa

A native witch doctor giving a "treatment"

SOUTH AFRICA is one of the most modern and progressive sections of the world . . . luxurious hotels and railroads, delightful golf and yachting clubs, superb motor roads, and all the comforts and conveniences of modern civilization.

But there is also the immensely picturesque native side of South Africa, so alluring to the tourist . . . the quaint kraal life . . . wild war dances . . . weird age-old tribal customs . . . the dignified Zulu chief and his retinue of dusky wives . . . stalwart warriors with their spears, shields, and knobkerries . . . the primitive musical instruments . . . the women's fantastic headdresses . . . the superstitious mummery of the witch doctor.

And all this within easy access for the tourist, as are all the other matchless wonders of South Africa . . . great Victoria Falls, the ancient Ruins of Zimbabwe, the Kimberley Diamond Fields and the mile-deep Rand Gold Mines, the vast Kruger Big Game Preserve, the Magic Cango Caves, the "Cape Beautiful" and many other wonderful features of this South African land of charm, contrast, mystery . . . and an ideal climate.

Send for illustrated travel literature and Booklet OD1 to

SOUTH AFRICA TRAVEL BUREAU

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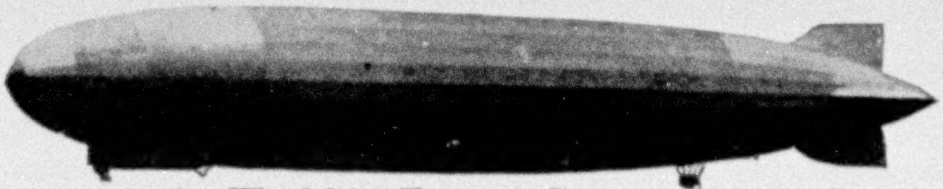
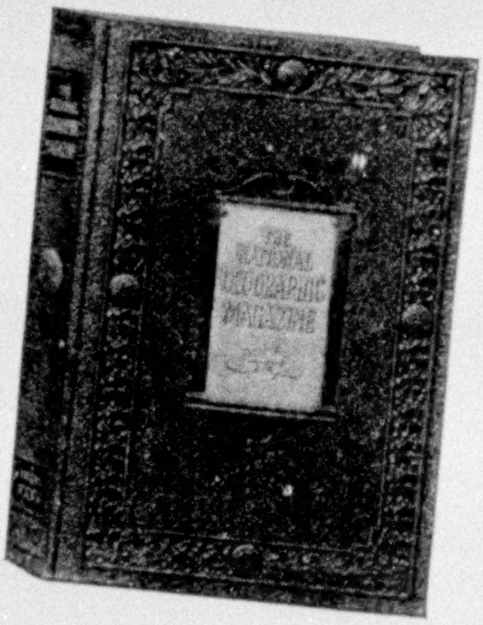


Around the World in Twenty Days on the "Graf" or in a Single Evening with the Geographic!



Use Molloy Geographic Binders to preserve your Geographics as they arrive, and you can enjoy your own privately conducted world-girdling tour from the comfortable depths of your favorite chair—any evening—and you can smoke if you like!

Each binder holds six issues, permanently bound with beautifully embossed stiff covers of finest levant artificial leather—bind them yourself, no gluing or sewing. Title and volume number in gold.

If you live in the United States, we will gladly send Molloy Geographic Binders on 10-day free trial. Customs regulations require full payment with foreign orders, but our money-back guarantee protects you fully. Only $3.65 a pair or $2.00 for a single binder. Prepaid in U. S., Canada, and Mexico.

Binders now ready for 1930 and back to 1910.

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Please send on approval .... pairs of Molloy Geographic Binders, Volumes .... Years ....

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Address ....

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Illegible - poor spelling ... RE-WRITE

THERE are two kinds of leisure—that of the loafer and the kind enjoyed by men who get their work done. The real college laborer is the one who is always doing yesterday's work. Always trying to catch up. So busy dodging failure that he misses success. Loafers and failures don't make the grade at college. They don't make the right kind of friends, and they miss about everything worth while.

The greatest little leisure-giver a college man ever had is Corona. Take that theme, returned with a kindly suggestion that it be done over so that it would be possible for someone to read it. A perfectly good theme but illegible. An evening's work wasted. The gang is stepping out tonight and you are staying in.

A Corona would have typed that theme in about half the time it took you to write it in the first place. And it would have been a better theme. Better composition, better style, no misspelled words, clean, readable.

Would you like to manage a team—be elected to a class office—have a story accepted by a college paper—make an editorship—or get mixed up in a lot of other college activities? In almost anything of that sort a Corona would be practically indispensable. It has everything and does everything. Its amazing smoothness, lightness of touch, speed and convenience are the product of twenty years of engineering effort devoted to the single job of perfecting the finest writing instrument for personal work that the world has known. Corona is so sturdily built that it should give a lifetime of service.

To be thoroughly convinced of the superiority of Corona you should have one before you in your room and perform on it for a few days. We should be glad to arrange through your Corona dealer for a trial. No obligation on your part of course. When you have decided to buy, make a small first payment and work off the balance gradually. Allowance made on your old typewriter.

The New Corona, with standard four-row keyboard, costs $60. Corona special, with three-row keyboard, costs $39.50. Many attractive colors from which to choose. A handsome traveling case comes with either model.

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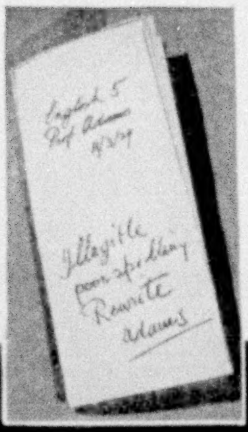
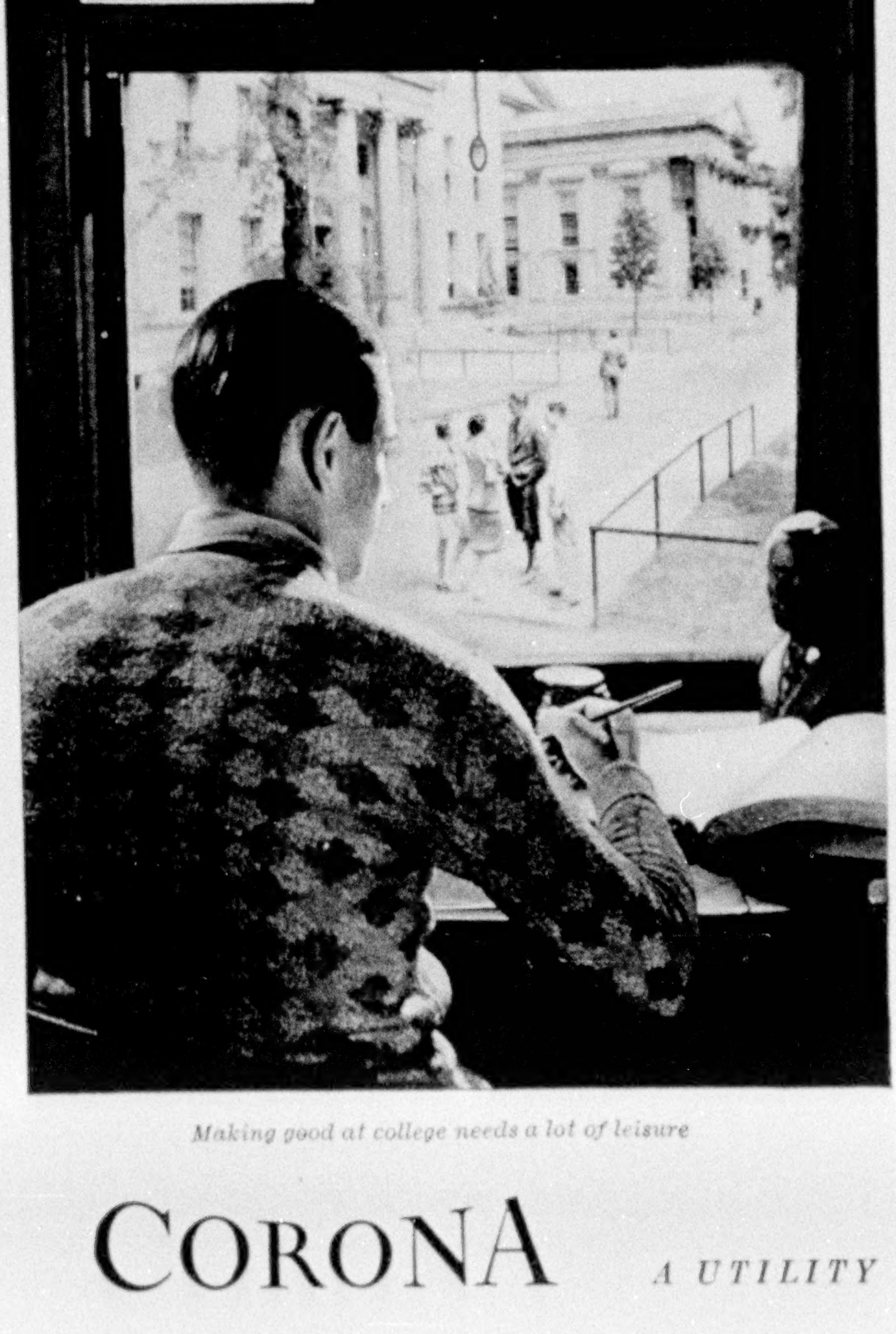
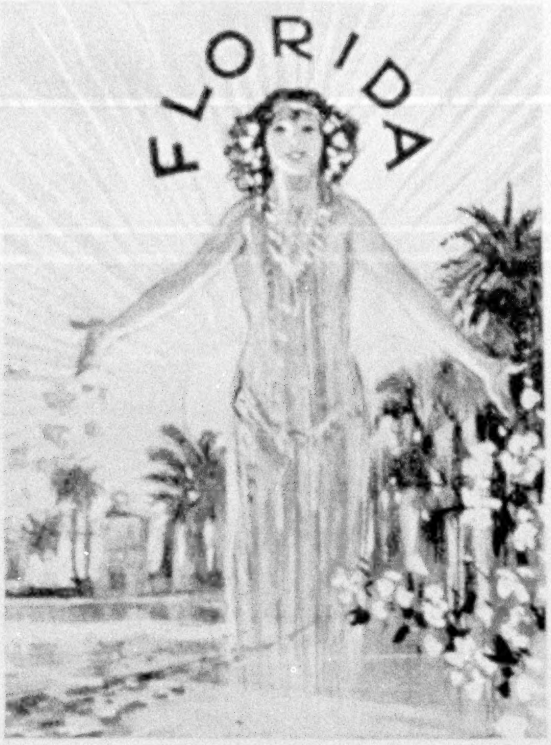




Making good at college needs a lot of leisure

CORONA

A UTILITY OF MODERN LIVING



THE BEATEN PATH *to* SUNSHINE

Hundreds of thousands on the search for another summer have beaten a path to Florida. The plan of a winter vacation has the approval of medical authority. Besides the romance and adventure of months of living in the nation's own tropics, the American family now knows that refuge from winter's hazards is a paying investment. In Florida all through the winter there is an irresistible urge to play, to bathe in life-giving sunshine, to repair the wear and tear of routine living. That is why, last year, more than a million visitors came to Florida. Each visitor found—as you will find this year—exactly the sort of accommodations, play facilities and sports they wanted at the price they wanted to pay. Accept this invitation, authorized by the Legislature of Florida, and come to The Sunshine State this winter!

Department of Agriculture
TALLAHASSEE, FLORIDA

THE SUNSHINE STATE

MAIL COUPON FOR FREE BOOKLET

Department of Agriculture,
Tallahassee, Florida.

Please send me free booklet with road map, showing points of interest in Florida, as advertised in National Geographic.

Name ____________________

Address ____________________

Are you going to EUROPE in 1930?

Fascinating journeys abroad . . . on the highways . . . on the byways . . . have been planned by Art Crafts Guild Travel Bureau for the discriminating European traveler in 1930. If you expect to visit Europe next year (Passion Play year at Oberammergau) let us help you make your plans and secure your reservations early. Write today for the Guild's booklets of European Travel:

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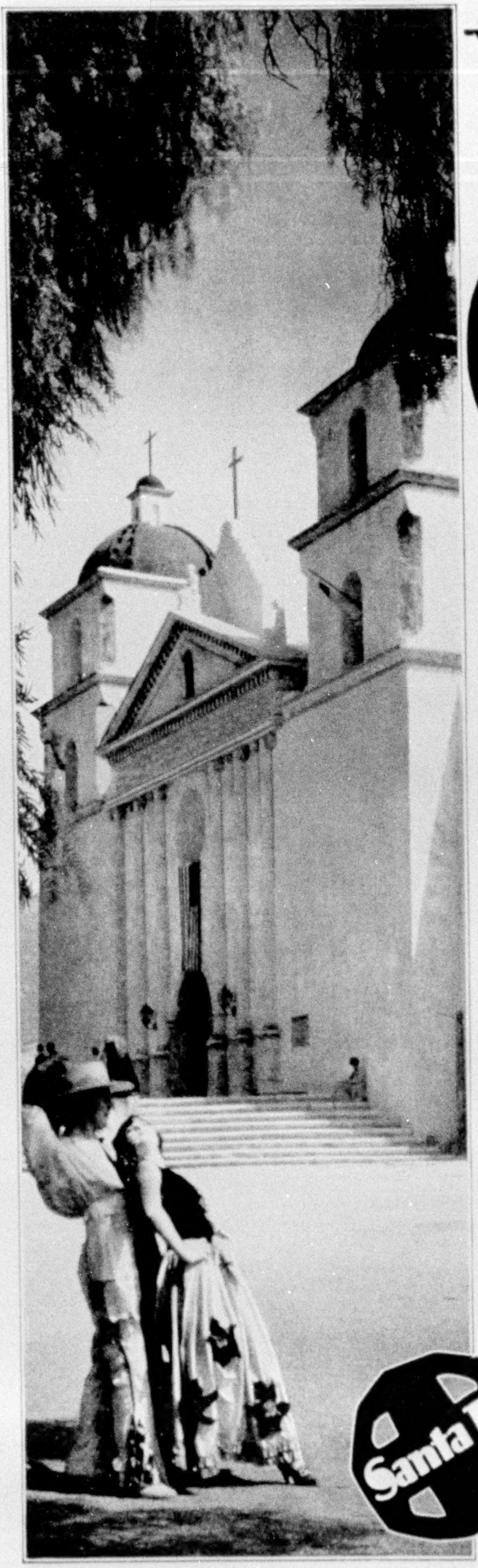

YOU know that California is the ideal place to spend the winter. YOU may not know the best way to get there

THE Santa Fe operates six daily trains to California. THE CHIEF is the fastest and only extra fare train to Southern California. The California Limited and Grand Canyon Limited are exclusively first-class—no extra fare. And then the Navajo, Scout and Missionary.

On Your Way the Indian-detour and Grand Canyon

Fred Harvey dining service is another exclusive feature. Block signal safeguards, too.

Midwinter Escorted All-Expense Tours on certain days in January, February and March.

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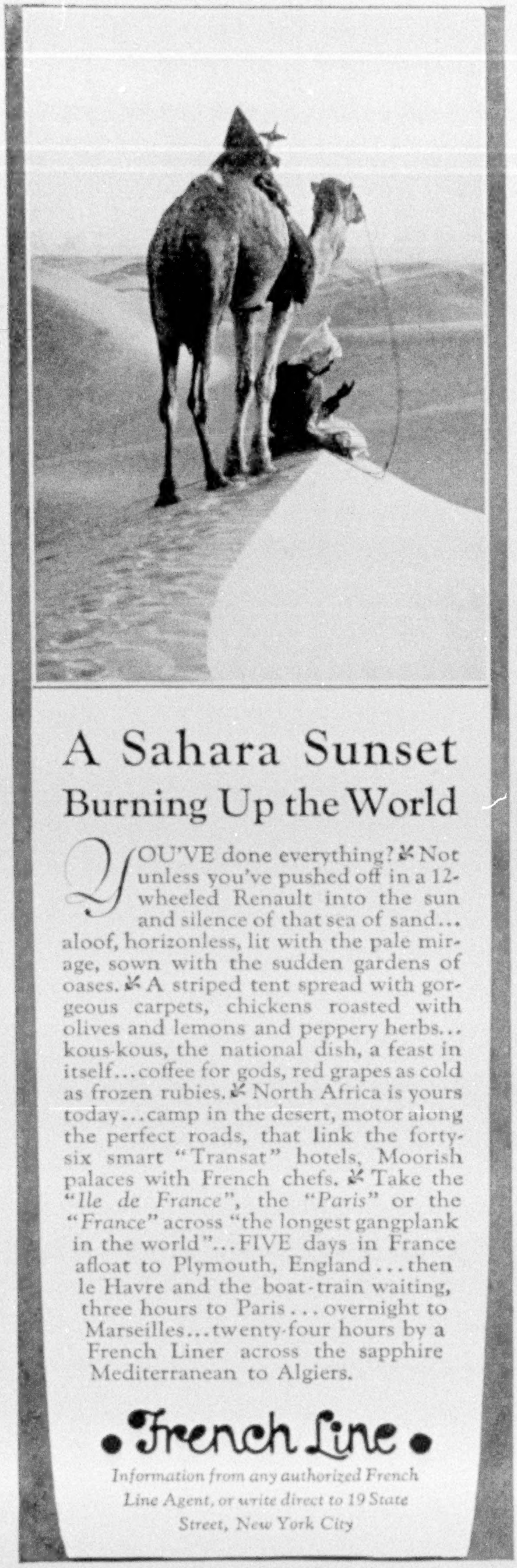
Please mail picture-folders checked below:

☐ California Picture Book
☐ Grand Canyon Outings
☐ The Indian-detour
☐ Escorted all-expense Tours



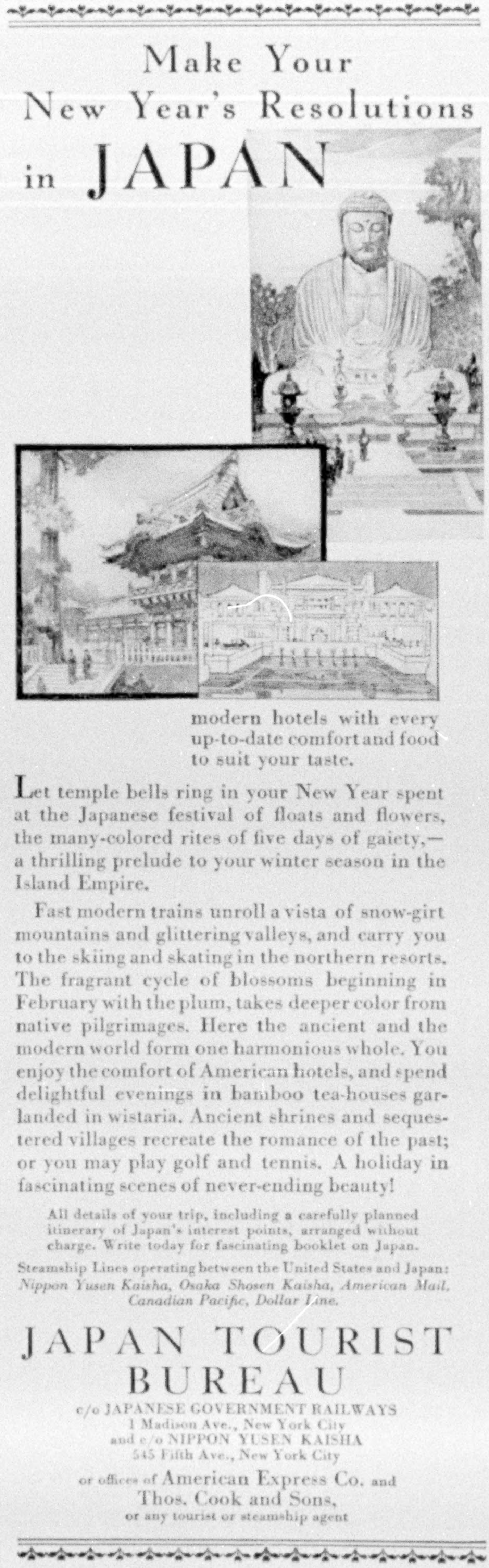
A Sahara Sunset

Burning Up the World

YOU'VE done everything? ❧ Not unless you've pushed off in a 12-wheeled Renault into the sun and silence of that sea of sand... aloof, horizonless, lit with the pale mirage, sown with the sudden gardens of oases. ❧ A striped tent spread with gorgeous carpets, chickens roasted with olives and lemons and peppery herbs... kous-kous, the national dish, a feast in itself...coffee for gods, red grapes as cold as frozen rubies. ❧ North Africa is yours today...camp in the desert, motor along the perfect roads, that link the forty-six smart "Transat" hotels, Moorish palaces with French chefs. ❧ Take the "*Ile de France*", the "*Paris*" or the "*France*" across "the longest gangplank in the world"...FIVE days in France afloat to Plymouth, England...then le Havre and the boat-train waiting, three hours to Paris... overnight to Marseilles...twenty-four hours by a French Liner across the sapphire Mediterranean to Algiers.

• French Line •

Information from any authorized French Line Agent, or write direct to 19 State Street, New York City



Make Your New Year's Resolutions in JAPAN

modern hotels with every up-to-date comfort and food to suit your taste.

Let temple bells ring in your New Year spent at the Japanese festival of floats and flowers, the many-colored rites of five days of gaiety,—a thrilling prelude to your winter season in the Island Empire.

Fast modern trains unroll a vista of snow-girt mountains and glittering valleys, and carry you to the skiing and skating in the northern resorts. The fragrant cycle of blossoms beginning in February with the plum, takes deeper color from native pilgrimages. Here the ancient and the modern world form one harmonious whole. You enjoy the comfort of American hotels, and spend delightful evenings in bamboo tea-houses garlanded in wistaria. Ancient shrines and sequestered villages recreate the romance of the past; or you may play golf and tennis. A holiday in fascinating scenes of never-ending beauty!

All details of your trip, including a carefully planned itinerary of Japan's interest points, arranged without charge. Write today for fascinating booklet on Japan.

Steamship Lines operating between the United States and Japan: *Nippon Yusen Kaisha, Osaka Shosen Kaisha, American Mail, Canadian Pacific, Dollar Line.*

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545 Fifth Ave., New York City

or offices of American Express Co. and
Thos. Cook and Sons,
or any tourist or steamship agent

The CHOSEN land

of thousands. See why, this winter

Many of your friends and neighbors have come to live in California. First they came to visit. Thousands of others who have been here once or twice are even now waiting for the propitious moment for the move. That is how California has been settled, by travelers who found here the homeland they sought.

There are two chief reasons for California's lure. One is the Springtime that is in the air at every season. Winter is as summer, children playing in the sunshine. The same sports summer and winter, plus the special gayety of winter social season. San Francisco, cosmopolitan and joyous. World port. A definite personality that wins the hearts of those who have seen many cities.

Yosemite and Lake Tahoe, nearby, provide winter sports. They are deep in snow and never lovelier than in winter. Del Monte, bathed in sunlight, green and beautiful. Spectacular golf courses. Yes, these are reasons why so many choose to live in California.

Another reason is opportunity. San Francisco is the natural gateway to the rich territory west of the Rockies as well as to the lands bordering the Pacific, in which 900,000,000 people are rapidly awakening to modern wants.

Business success is no easier here than elsewhere. The same requisites are necessary for success in San Francisco as in any other city. But for those who are already winning success somewhere else, California offers a brighter, fuller, freer life. They are the kind of people who are coming to live. For them the future holds brilliant promise.

You have long dreamed of California. Why not come this winter to enjoy a month or two of lovely Springtime?

SAN FRANCISCO

IN CALIFORNIA—"WHERE LIFE IS BETTER"

Send now for your copy of the 32-page booklet— profusely illustrated

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You may send the free book, "San Francisco . . . in California—Where Life is Better"

Name ....
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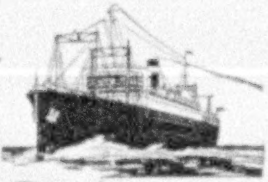

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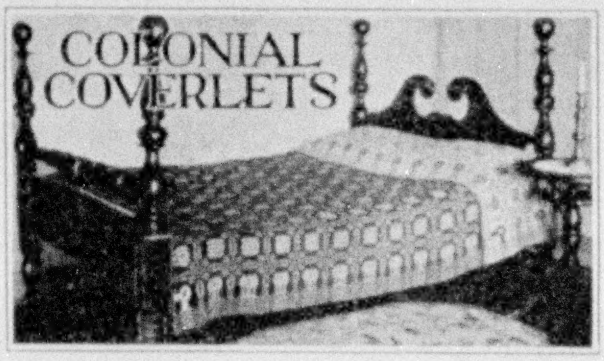

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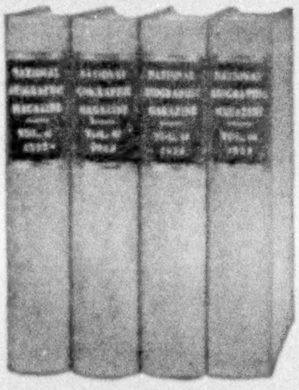

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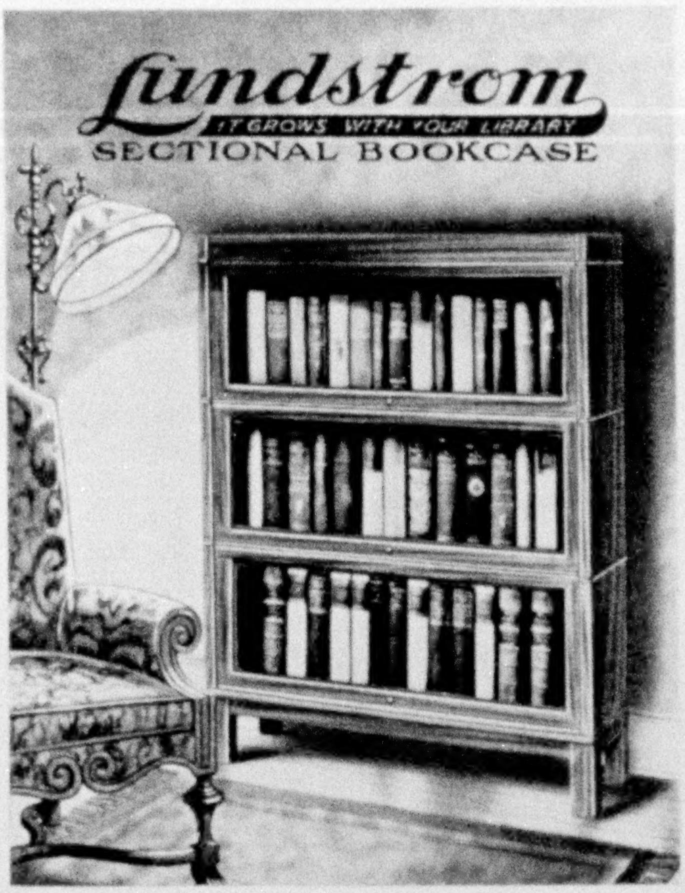

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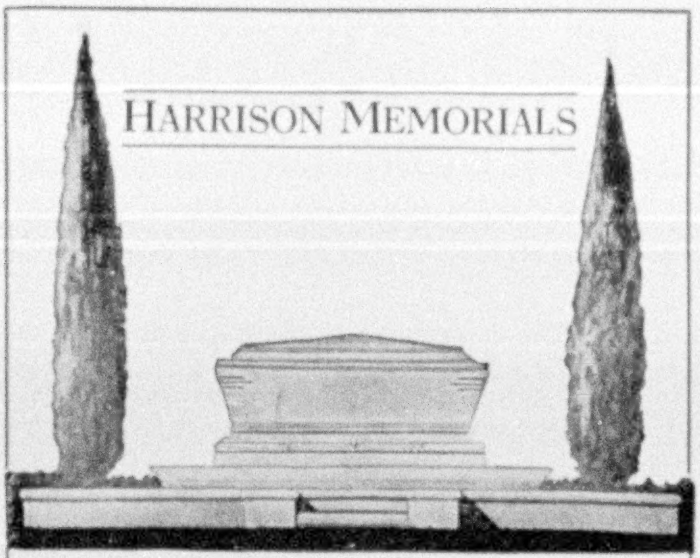

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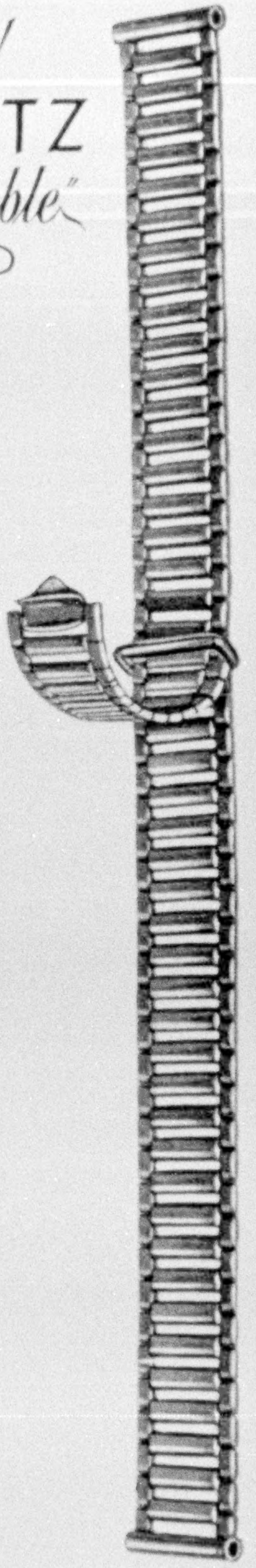

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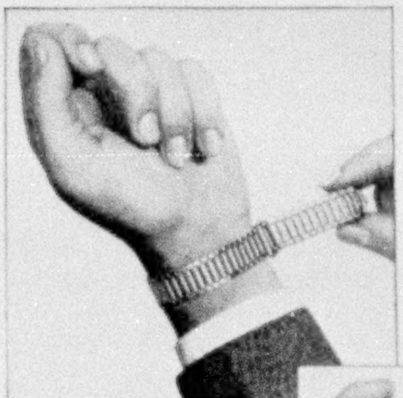

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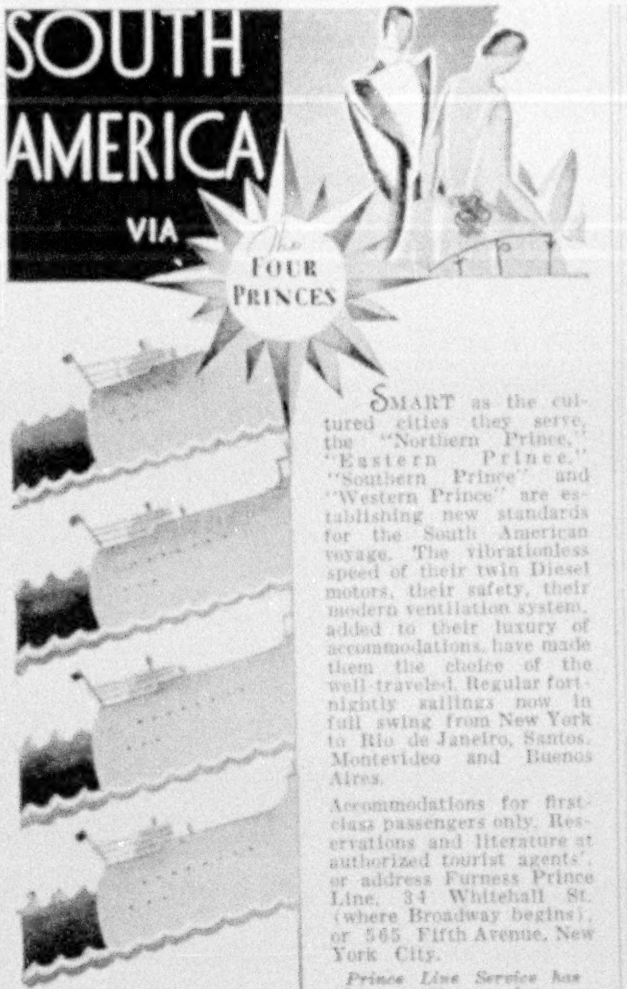

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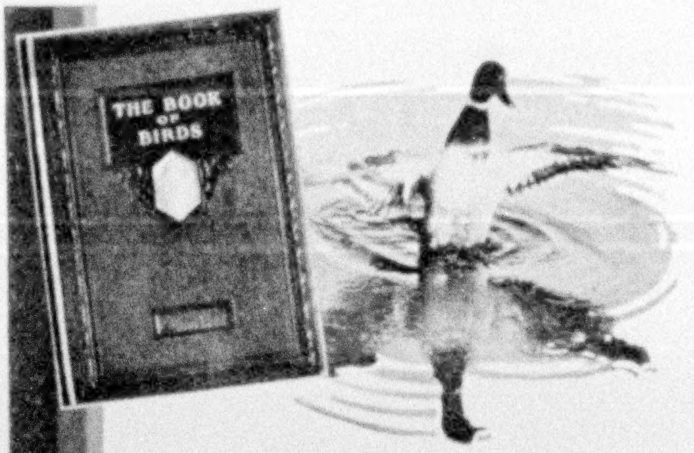

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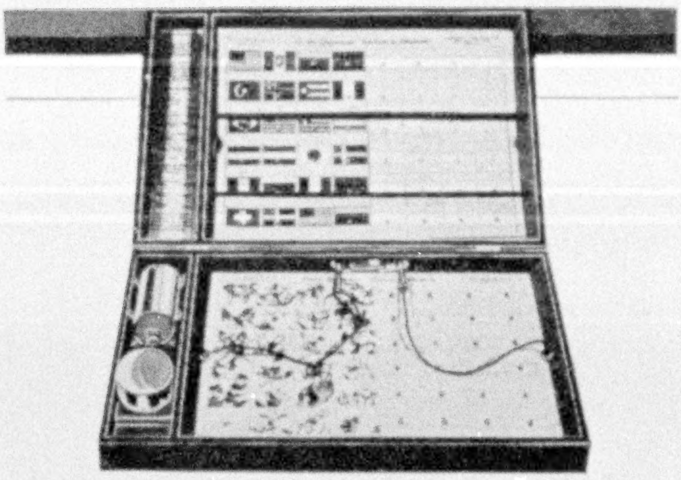

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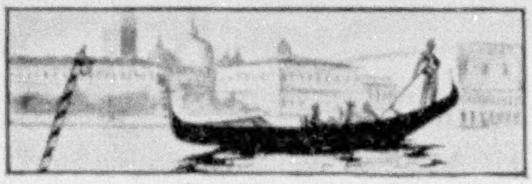

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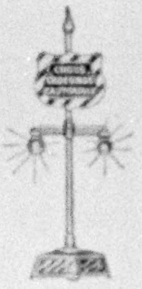

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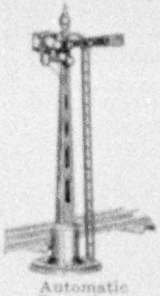

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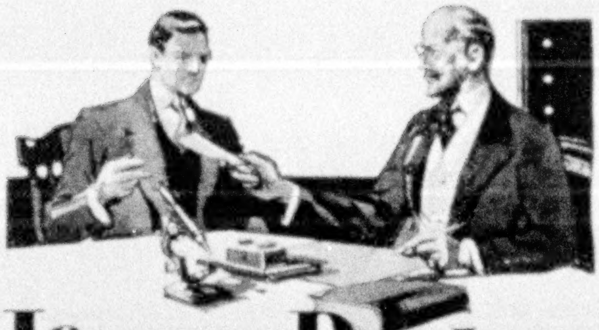

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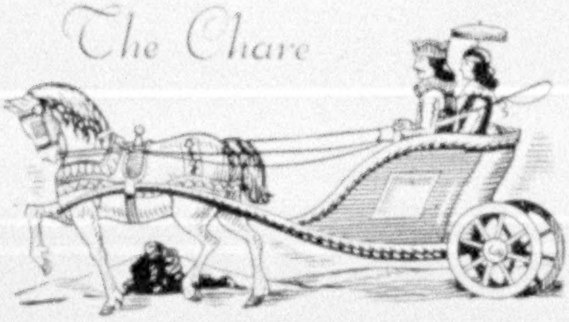

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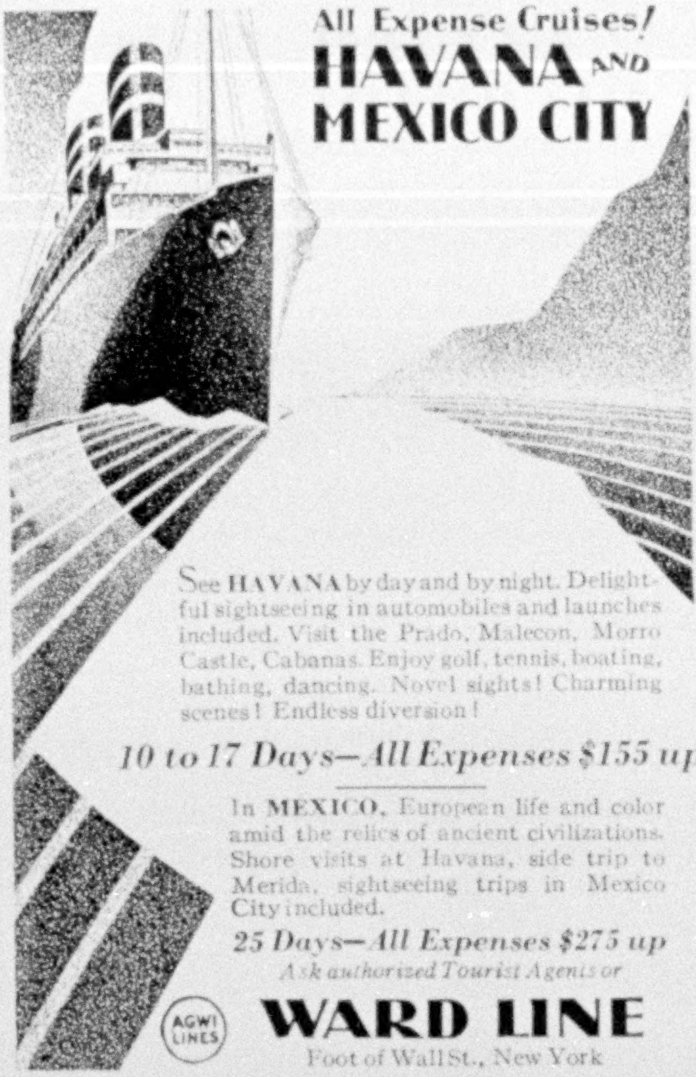

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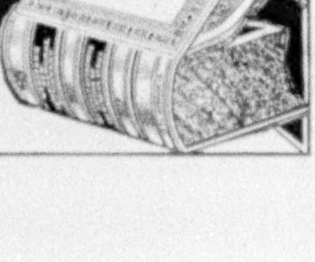

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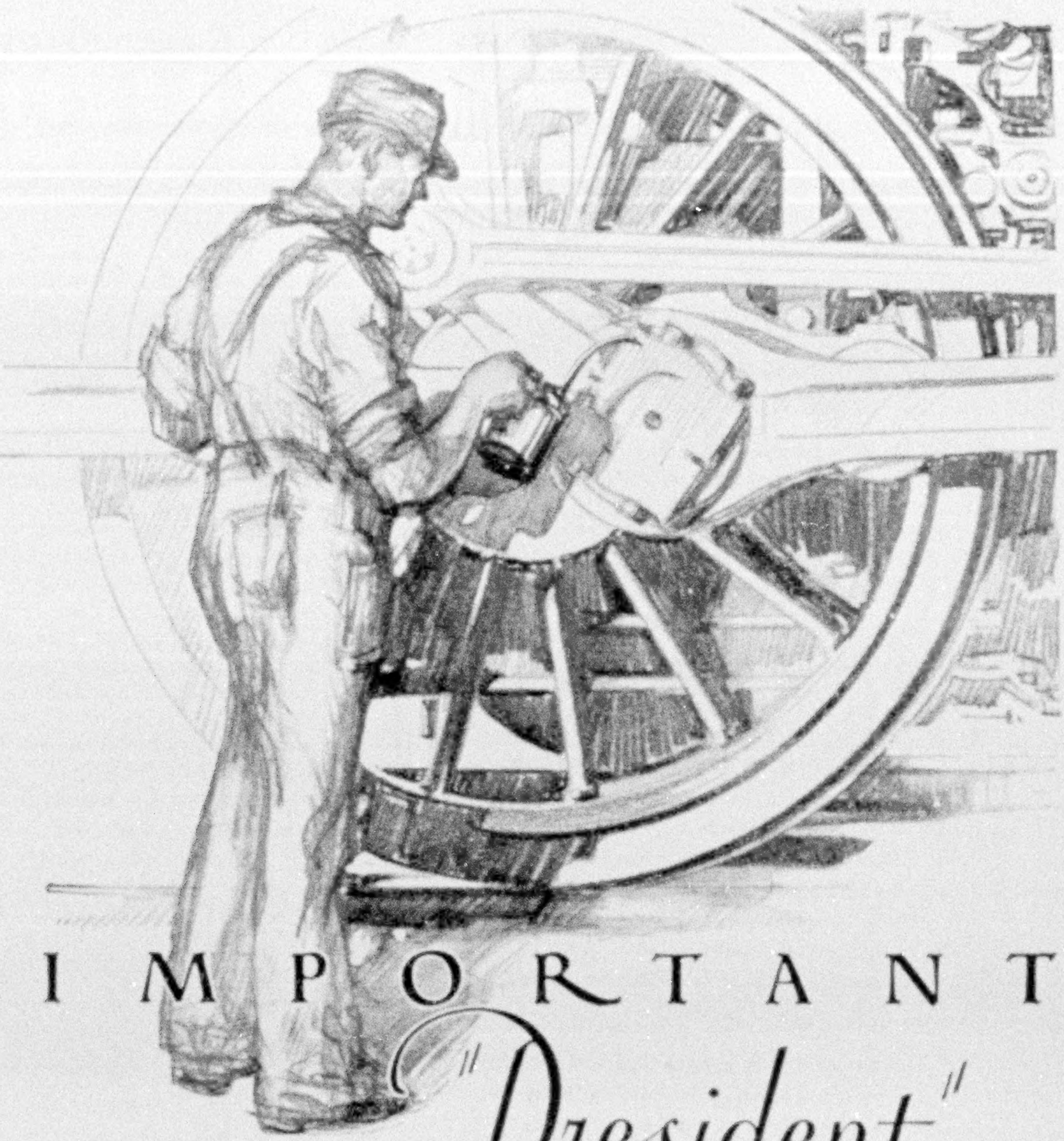

AS IMPORTANT AS THE "President"

"A messenger boy is as important in his sphere as I am in mine. The minute a single man slacks on the job a bolt begins to rattle."

Sir Henry W. Thornton,
Chairman and President,
Canadian National Railways.

IT is not magnitude alone which makes Canadian National a truly great railway system. Neither is it perfection of equipment. It is something more rare—*character*. There are 108,000 men in the army of Canadian National employees and they possess one common characteristic—enthusiasm.

Among these 108,000 men one thought has been preached and practised and preached again—a messenger boy is as important in his work as the president in his: every man must do his job or the whole will falter.

An intangible thing, *esprit de corps*—but a mightier force than all the mammoth locomotives which take the Rockies in their stride. It has made Canadian National a great railway and a great institution, alive with enterprise and purpose, like the virile young nation of which today it is the nerve and sinew.

The Canadian National Railways System has over 23,000 miles of track, a chain of hotels, vacation resorts, steamships, a telegraph system, radio stations, an express service. It has the mightiest locomotives and the most luxurious equipment that men can build or money can buy. It spans a continent from east to west and links the Great Lakes to the shore of Hudson Bay. The largest railway system in America.

Radio reception on Canadian National trains today—telephone connection from moving trains to home and office perhaps tomorrow. The last word in steam locomotion today—new marvels of oil-electric locomotion on the horizon. Maximums of efficiency and luxury today—better, finer, greater things tomorrow. That is the product of enthusiasm. It is the character of a railway system in which messenger boy and president have the same unceasing urge to greater achievement.

CANADIAN NATIONAL

BOSTON
333 Washington St.
BUFFALO
420 Main St.
CHICAGO
4 S. Michigan Ave.

CINCINNATI
49 E. Fourth St.
CLEVELAND
925 Euclid Ave.
DETROIT
1523 Washington Blvd.

DULUTH
430 W. Superior St.
KANSAS CITY
705 Walnut St.
LOS ANGELES
607 So. Grand Ave.

MINNEAPOLIS
518 Second Ave. So.
NEW YORK
505 Fifth Ave.

PHILADELPHIA
1422 Chestnut St.
PITTSBURGH
355 Fifth Ave.
PORTLAND, ME.
Grand Trunk Ry. Sta.

PORTLAND, ORE.
302 Yamhill St.
ST. LOUIS
314 No. Broadway
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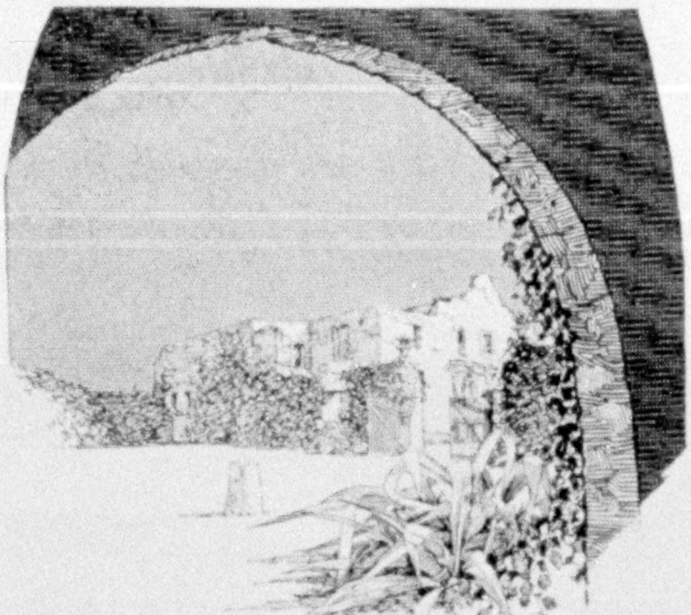


SAN ANTONIO

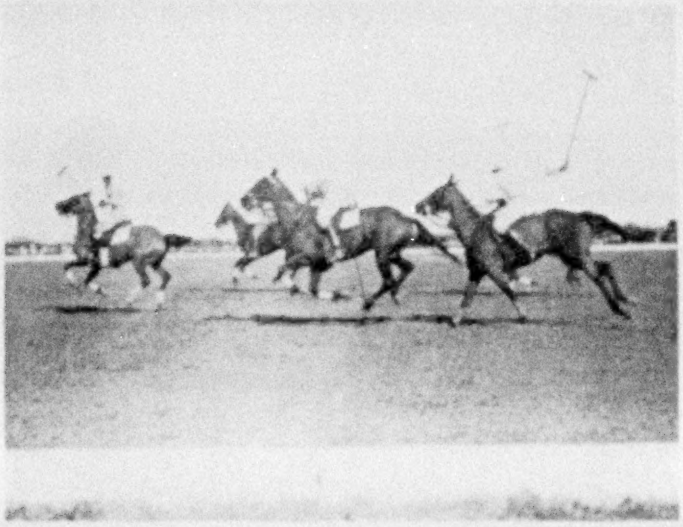
--old in years

-- young in spirit!

Travel the road to romance, *this* winter, south to sunny San Antonio, where the brooding Alamo drowses on its palm-shaded plaza ... step into the cloistered dimness of ancient Spanish missions ... take the high road to the hills nearby ... fly to the coast for duck hunting, or motor to Old Mexico for dinner!

Every day is a new and intoxicating adventure in this metropolitan city of 300,000 - an outpost of Spain 200 years ago - where sunny days coax you outdoors to play polo, golf, tennis or to canter along leafy bridle paths!

The cup of life brims full in San Antonio. Come south *this* winter and learn at first hand the magic of a city 200 years *young!*



Dept. 26, Municipal Information Bureau, Astor Bldg., San Antonio, Texas.
Please send me free booklet (check)
☐ "What To Do In San Antonio"
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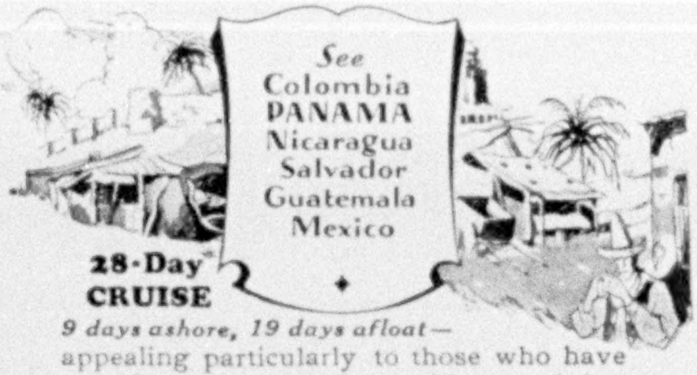

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Nicaragua
Salvador
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Mexico

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Including sight-seeing and hotels ashore.

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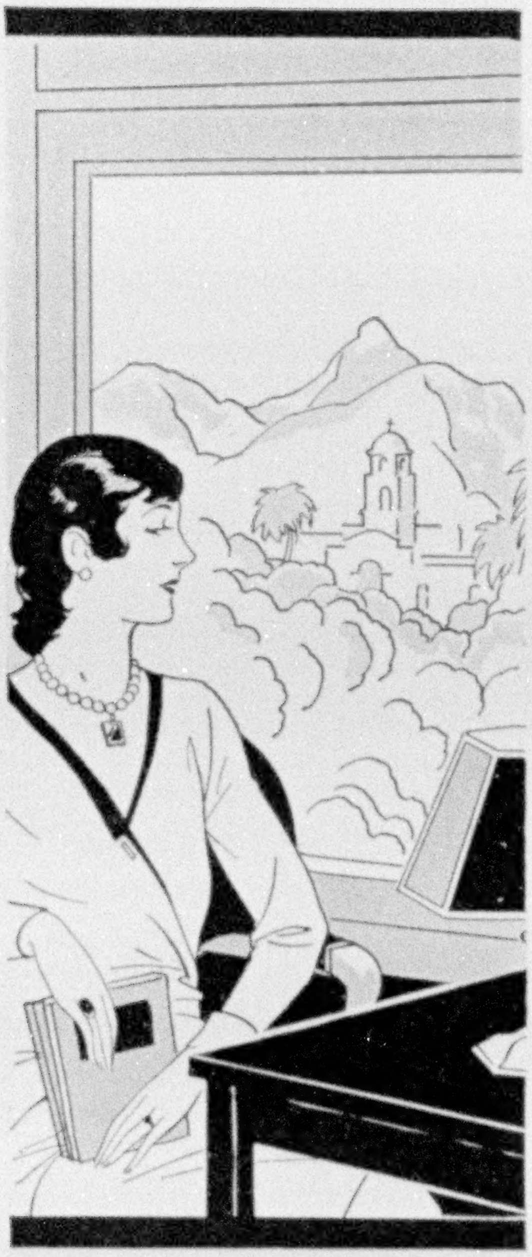
TO SOUTHERN CALIFORNIA



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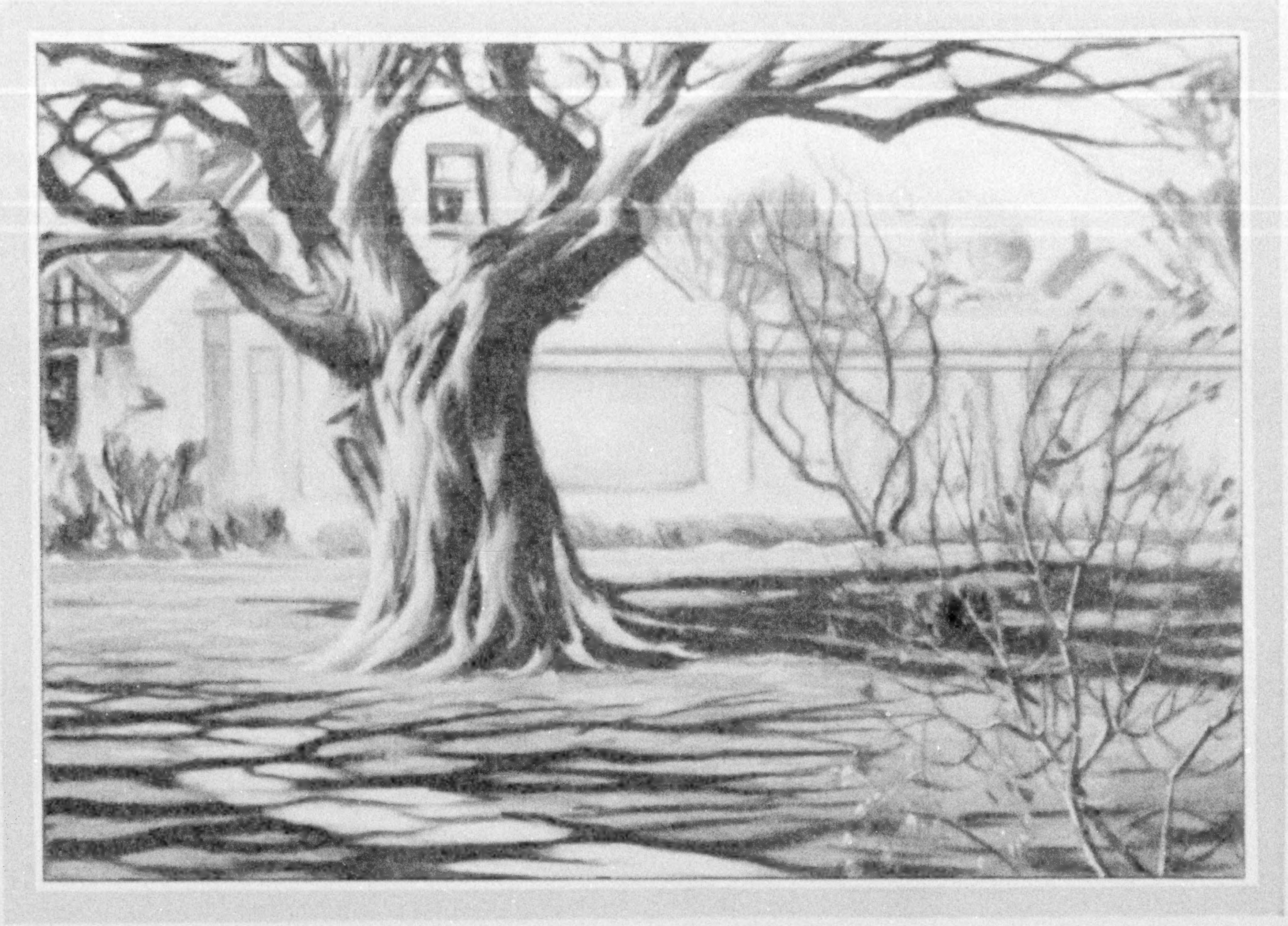
¶ Sophisticates enticed by the bizarre have opened the season each year a little earlier. They have come to know the rapture of Christmas under a velvet sky . . . windows ablaze in the palaces of departed Hawaiian Kings . . . clear-throated carols ascending to pendant stars that glow like orbs of fire through the fronds of swaying palms . . . They come in the mellow beauty of autumn to linger until languorous spring bursts into the crashing colors of Hawaiian summer . . . For them winter is only a fiction . . . They know tonight the miracle of a moon of molten silver pouring its translucent sheen over majestic mountains and dancing waters . . . the haunting harmony of sobbing steel-guitars and plaintive voices that rise and fall on vagrant breezes that drift in from the sea.

¶ They have learned that Hawaii is just a *few days* away . . . a land of enchantment where shimmering rainbows drape verdant golf courses . . . where friendly beach-boys weave native hats or conquer racing waves, erect on charging surf-boards . . . where sporty denizens of the deep lurk in constant challenge to the mettle of the ardent fisherman, or idle days may be dreamed away in tropic bowers still primitive and unspoiled.

¶ *You can go from any of the four great gateways of the Pacific in four to six days, according to the liner selected. And you do not have to bother with passports or other formalities. Hawaii is an integral part of the United States—as much so as your own State.*

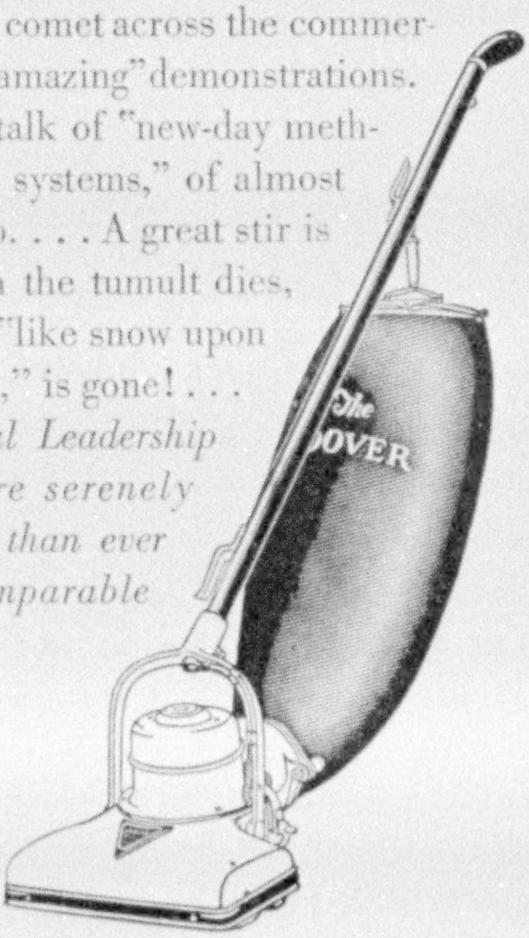


Where are the Snows of Yesteryear?

Every now and again, the placid surface of the electric cleaner industry is startled by a fresh commotion. . . . Some one machine or other is rushed forward as the champion of a new popularity, and passes as a comet across the commercial sky. . . . Inspired salesmen hurry out to perform "amazing" demonstrations. Special "inducements" are offered. There is much talk of "new-day methods," of "above-the-floor efficiency," of "sanitation systems," of almost everything except the electric cleaner's essential job. . . . A great stir is made; a few are blinded by the dust. . . . But soon the tumult dies, the fever passes, and the forced-draft popularity, so "like snow upon the desert's dusty face, lighting a little hour or two," is gone! . . . *Each time the clearing atmosphere reveals the real Leadership more solidly entrenched in one machine, more serenely enthroned in one outstanding product, more firmly than ever upheld beyond serious challenge in one incomparable cleaner*—The Hoover!

The HOOVER
Reg. U. S. Pat. Off.

IT BEATS ... AS IT SWEEPS ... AS IT CLEANS
ON A CUSHION OF AIR



PRESS OF JUDD & DETWEILER, INC.
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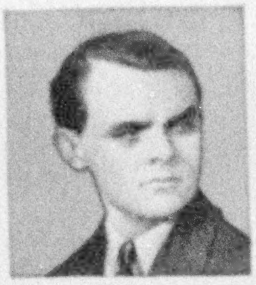
Victor
micro-synchronous
Radio



"Victor-Radio is musically a singing likeness of the actual performer...a revolutionary achievement. I close my eyes and imagine I hear the artist in person."

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A Radio that is really a Musical Instrument

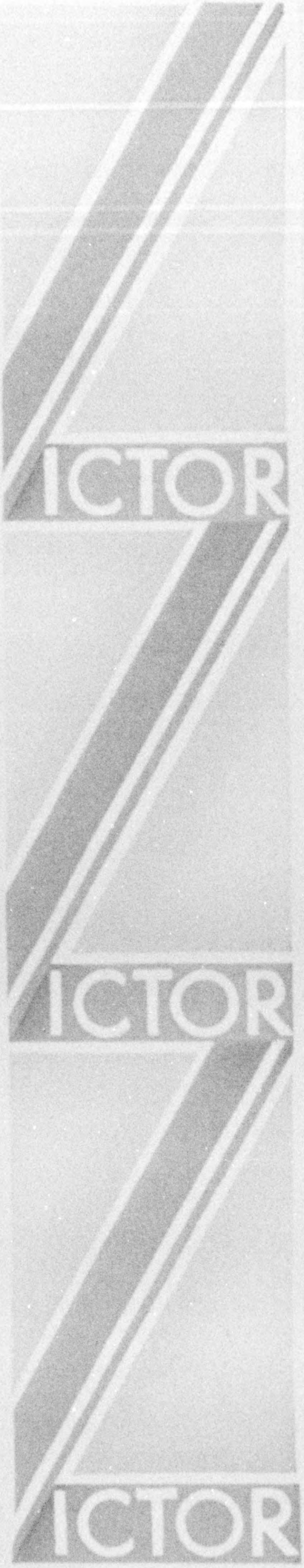
The perfection by Victor scientists of two remarkable new instruments suddenly revolutionized the world's standards of sound reproduction.

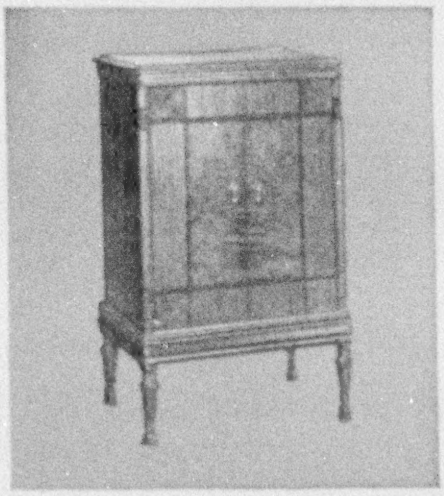
Here for the first time is a radio that meets the exacting requirements of the world's greatest artists – of every type of voice, of every instrument.

Victor-Radio is the only radio that is micro-synchronous. There is no guesswork about Victor performance. Hear Victor-Radio whether you have a radio or not!

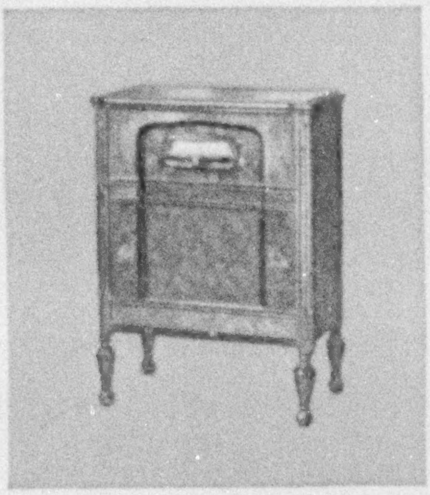
And hear the sensational new Victor Radio-Electrola – the finest of musical instruments. It brings you – music from the air that sets a totally new standard of realism...and recorded music, brilliant and rich far beyond anything you have heard: all the music of the world, undistorted, at your fingertips!

These instruments are of world-famous Victor quality throughout. Only unparalleled Victor resources make such low list prices possible. Victor Talking Machine Division – Radio-Victor Corporation of America, Camden, N. J., U. S. A.

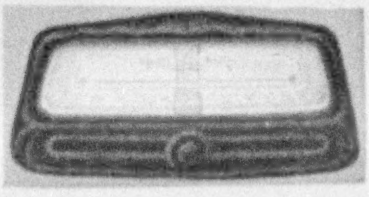




Victor Radio-Electrola RE-45. The modern, complete home instrument; reproduces records electrically. List price $275. Less Radiotrons.



Victor-Radio Console R-32. Modernized circuit to meet present-day broadcasting requirements. List price $155. Less Radiotrons.



Victor Super-Automatic Station Selector. Just slide the knob to right or left – you have the station you want.

Victor-Radio
with Electrola

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